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489

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ggttaccctc ctgctggcta tcttgcacct ggagctcacc attcaggaca ttctggtggt 180  
ggactcggan gcatgatagc aggtgcagct ggtgcagccg cagcagctta tggagctcac 240  
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catgcccctg ctcatggctt tggccatggt ggtcatggta aattcaagca cggnaaagca 360  
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ggngggaggg ag 432

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aactctaacc atctcggagt aatctacgag attgatatcg ctgcggatcc tcttgtcaat 180  
aagttggaag atgctgtcca ccggattatg gtacgccgat ccgcacctga ttggctcnct 240  
tttgtecccg gtgcttcnct ttgggttcca cctcctagat cccagtctca tgggategct 300  
aagctcggtg agaagctggn caatccgata tctgatgaan aatctanttc antctcatcg 360  
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426

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acgggttgga ggagtttgct aaccgtttct ccattcgga tggtttcaga nacaaagtta 180  
cagtctacat tttcaattta tcctccacac tctgagatca accagcattc tagtagtgaa 240  
gctcttatgc anatggattc cgcacagtat cagttcanca aacgtgctcg attgtttgaa 300  
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aagacgaaga gtcaaaaccg acttgttgct ttggaaattg ctacgatggg gaactcaaag 180  
gcttaccggt ccacaaagaa cgcaaagctg actgtgactt acagaaccgg aactggtaat 240  
gacangcgca gttaccatga ccaggttctg ttcantccgg ttcttgatca gccttattan 300  
tcgangccgt tattatgtcn gtanacgacg tgggaagcaa tcaaggagga gcttcngggc 360  
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ccattgcatt aaccgggcaa gcataaccag agccaagata ttattctacc ttgtggagtc  180
cagtcccttg catctgttag tctttggaca ctttttcttt agtatgctaa gtaagaaaca  240
ggatgactct gctcttacag atgatcaagt ttatcatgct tctgectgct gtgctatcgt  300
atctgacatc agttattgca aaactcgaga agccttgtaa taaatgtttg gatataactt  360
cagtttatcc aaatatacca ataaatgggt ttccttcagt ggccgangtt tttggcnagg  420
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agtatggagg aagatcgtgg ggaagcgatc gttttagata tttcgccgga gattaataat  180
actccggcgg taatgatgag agttccacgg aggattcgtg agaggctttt gtctgactgt  240
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ctacgaagac agcaatttta tcataacgtt tcgagaaagg ctcgtgctaa acctanaagt  360
ccttcacgat catctgatga agaacttggc caacgaatcg aagcaagact tctggctgct  420
gaacaaaaaa aggttggaga ttcntgccaa aggcacagat gccgttttgg cgaagttang  480
  
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483

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cgtcagcttt	ggctacgaca	aatcgccacg	tgtcaaactc	tcattggctt	cccgcagtag	180
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cgttggtgga	tgtgaagccg	ttacatgcga	gggttgagac	ggtgaatcca	attctcttca	300
aaaatgggta	aggttgcgga	gcttggttaca	aggttcgatg	cttggacaag	agcattttgt	360
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421

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 aagtttgagt atgccaatgg ttctgaagtg gttgttggan atgaacatgg agagaagact 240  
 gagctaggag ttgaagagtt tgagattgat tcggatgact acatcgtcta cgtggaaggt 300  
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 atgtgtaaga ggagctctga aaggcaagac cgtattactc gttacccatc aagtggattt 240  
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421



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 taagttctgg caatttatga ttgctggttc gattgctggc tccgtcgaac acatggcgat 300  
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 cattgtctcc tttcttctct atgctccatt gttcttatct tcaccagttc ctgancctga 180  
 atctgtcggt gaagaagttc acaagagnat taatgcgtcg gttgcaggaa gaaggaagtt 240  
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 ctgggagcan naccgtcaac gtctcgctga ntgcgccatt ggattcggcn aaaacgccat 360  
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 gctcagagat caggaagact tccgtacaac cagcgcgtga cttggcggtga tcaactctggt 360  
 ctcaccgatg gtcttgaaca aggggttgat ttaatgggag gatatacga cgccggagac 420  
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<210> 4138  
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604733-466660

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aatcaaaggc agagtctgct gcacctgttc cagtcctgg tcccactttc taagctaact 300  
gatagcttct tagatggnac angcantgtg tatctagagg agttacaaag agcttgggag 360  
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 ttgttgcggg ttgttcgacc caccgcttg atctaataaa ggtccgaatg caacttcaag 360  
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 gtgatatcga acggcatgaa cgacgacgac gatactaaca atattaacaa cagttccact 180  
 gaatttgata acaatcgtat cggagacgga gacgataaca gtaatctgaa tcagatcaaa 240  
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 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnacca ccatctgtac 240  
 aaagcaaagt tatcatcaaa ggaaaccaa ccattctgag tttcaaagct attttccggc 300  
 ttggtttctt cagcaccacc aatgggttct ccaattggta cttgggtatc tcttacgctt 360  
 ctatgccaac tcccaccac gtttgggtcg ccaatcgaat ccgaccggt tcggatcctg 420  
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 agcagcactc gcggcgatgg tttccttaac ggatccngag aggaggcgga aattgcaggc 300  
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<223> unsure at all n locations  
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aggagatcga acggccagta gcgtatagga gaggatgac gacttgggga gattgggtgg 240  
aacgaaatat tgatcctcta cgtaccactg tcttctttgc naagcatgtc tctctttcac 300  
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<212> DNA  
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<223> unsure at all n locations  
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<400> 4153

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tgacacggcg gctgcagtgg tggatatggc catgacttac cttattaagt accctgaagc 120  
aatgaagaaa gctcaagacg aagtgaggag tgtgataggt gacaaaggat atgtctctga 180  
agaagacata cctaattctc cttacctaaa ggcagtcac anaggagtct ctttcgggct 240  
cgaaccagtc atccccattc ttctacacag nggaanctat cgcaagacgc agagataggt 300  
ggctatgata tttccggggc aaggacnacc attcaagtnn aacncatggg gcgggttctc 360  
cgtgacanan gccgcnttgg gggagacaac cctnaa 396

<210> 4154  
<211> 345  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-053-Q1-E1-C11

<400> 4154

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tctctttccg agaaatcctc atccgctcgaa gctcagggt a acgccgtccg agctctcaag 120

gcttcccgtg cagctaaacc atgaaatcga tgctgccant gagcaactca acaaattgaa 180

gctcgagaaa tctaccgtcg agaaggagct tcagtctatt ancagtagct ccggtaatgg 240

ttcgcttanc cgtgaggcnt ttcgaaaagc tggtgtcant acncncgagc ggggtttgtt 300

ctanancnct tcgtntaaga tcnacagtgg ngtcggctgg acttt 345

<210> 4155

<211> 357

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-053-Q1-E1-C12

<400> 4155

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agccaggaat ggcgagtgtg aaggatatgc cgttgcttca ggatgggtcca ccacctggtg 120

gattcgcgcc ggtccgatat gctcgccgga tctccaacac gggacctagc gccatggcta 180

ttttccttac cgtttccggt gcttttgctt ggggcatgta ccaagttggt cagggcaaca 240

aaatccgcag ggcgttgaag gaagagaagt acgctgcacg tagagcaatt ctaccgattc 300

ttcaagctga agaagatgaa aggtttgtgt ctgagtggaa caagtatcna gaatacc 357

<210> 4156

<211> 407

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-052-Q1-E1-G5

<400> 4156

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ttgacggcgt tgaaaatcaa atgaacggtc cagattcatc tctcgtctc tctcaagatc 120

ctcgtgagcc tcgctcatta ttatcatctt cttgtttccc aatcaccctc aagttcgttg 180

atgtgtgtta ccgagtcaag atccatggca tgagtaacga ttcttgtaat atcaagaaac 240  
tattaggatt aaaacaaaaa ccgtccgatg agacaagatc gacggaggag aggacgatac 300  
taagcggagt caccggaatg atatcaccgc gcgagtttat ggccgttctt ggaccatcgg 360  
gaagtggcaa atcnacgcta ctaaacgcaa tcccaaggga aaacncc 407

<210> 4157  
<211> 466  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-E2  
<400> 4157

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ccgcgaaaag ctaatccaaa actctttaat tatttgcaac aactgatcaa tggctgtaac 120  
aagctcttct tctacttggt atggtttctt catcatcagc cttattgtta tcgtttcttc 180  
attgtttggg acatcatctg cgcagttaaa cgcaacgttt tactcaggca catgccctaa 240  
cgctcttgcc atcgttcgca gcactattca gcaagctctt caatccgatg caagaatcgg 300  
aggcagccta atccgccttc attttcacga ctgttttggt aatggttgct atgggtcgct 360  
cttgcttgac gacacttcaa gcatccagag cgagaagaac gctcctgcca atgcaaactc 420  
aactagagga ttcaatgttg tcgagagtat caaagncaag ccccca 466

<210> 4158  
<211> 469  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-E3  
<400> 4158

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ctacgattgt tctgccata tgatttgggt cggtgagcga accagacagc tagatgggtgc 120  
ccatgtcgag ttcttaagag gtgttgctaa tcctcttgga atcaaggatga gtgataaaat 180  
ggatccaaag gagctagtga agttgattga gatcttgaat gctgacaata agcctggaag 240

gattacaata atcacaagaa tgggagctga gaatatgaga gtgaagcttc ctcatttgat 300  
cagagaagtg cgacgtgctg gacagattgt gacttgggtc agtgatccaa tgcacggaaa 360  
caccattaag gtccttctgt gtctcaagac tcgtcccttt gacgccatct tggctgaagt 420  
gagagctttc ttcgacgtgc acgagcaaga aggtaaccan cccggagga 469

<210> 4159  
<211> 426  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-E4  
<400> 4159

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caaaaacagg aaatattanc ttcagaggca tcttttgagt atgcaagaag ctgtttgcat 120  
cnacaaaagtg aatggtacag gatactttgt atggtcattg ttggataact tcgagtggna 180  
agatggttac aaaaacagat ttggactcta ctacgttgat ttcaaaaata acctcacacg 240  
ttacganaaa gaatccggca agtattacaa ggatttcctc agtcaagggtg ttcgtccatc 300  
cgcgctcann aaggatgaag ctttaagcta nttctgtttc aatgtgtttt tcctaagttt 360  
tactttgtga agtgaccaag attcatgang gccctgggtc taananaaag gagtttaatt 420  
ttcctc 426

<210> 4160  
<211> 478  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-E5  
<400> 4160

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gcgtgggaaa aaagcaaaag actcagctaa aaagcgacct actagagagg aacgggagag 120  
aaacaaaagc aatgggaaga agagttctta tgctgatcaa cctgtatcat ttgtgtcaag 180  
tggcataatc gattctgaga tagctgttgc aaaaacctca gttgaaaaag ttgcaaaaaga 240

ggtagctgaa actactccgg gaacctctaa tggagcagac attggagcat ttgaggtaca 300  
 taccaagagg ttttggatcc aaaatgatgg ctaaaatggg attcatagat ggaggtggtc 360  
 taggaaagga tggtaagggg atagcacagc caatagaagc tgttcagcgt ccgaaatcac 420  
 ttgggttang tctggatttc tccattgaca ctgaagaccc gaatccgtca agttataa 478

<210> 4161  
 <211> 419  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-052-Q1-E1-E6  
 <400> 4161

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 agattacttc cgaagatcag aaacaaacac aaactgtgaa tcgttgtttg ttaattctct 120  
 ttaaaatcgc cagaagaaag agatctccgt tttctacaga agaaaagcaa gagagtaaga 180  
 atgggatcgg aacaaaacga tagcacaagc ttcacgcaat cgcaagcttc agagccaaag 240  
 ctatgtgtta aaggatgtgg tttcttttga tcaccatcaa acatggatct ctgttctaaa 300  
 tgttacagag gcatttgtgc tgaggaagct caaacagcag ttgctaaagc tgctgttgaa 360  
 aaatctttca agccttctcc tectcgtagt ctcttcatag caagaacctc ctgntgttg 419

<210> 4162  
 <211> 409  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-052-Q1-E1-E7  
 <400> 4162

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 aggtaaaacc tttttcccca gattatttct atttcgttcc tctcttctcg atttcgactg 120  
 attttccggt tttatgctct tctcttttcc attttgaact ccaattttga ttcttttaaag 180  
 aaaatgagtt gctttgggtg ttgtggggag gatgatgata tgcataaaac tgctgattat 240  
 ggaggtcgtc ataaccaagc caaacacttt cctccaggaa atgatgcaag gcaccaccaa 300



gcctctgaaa ctgcacagaa gggtcctcca gttgtgaagt tgcagcctat tgaagtacct 360  
attatccctt ttaagtgaac tcaaagaagc aactggatga atttggntc 409

<210> 4163  
<211> 499  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-E9  
  
<400> 4163

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gctccgtacg atcacaagga ttcaactgatt tctaagcttt tcatagaaag aagaagaaaa 120  
aggcgggaatt cgatggtgga tgcgattcaa gtagctgagc tgagaagatt cgtcgagcag 180  
ttgaaattga atccttcgat tctccacgat cctagtctgg ttttcttcaa agaatatctc 240  
cgaagtttag gagctcaagt tccgaagatt gagaaaactg aaagagatta tgaagataag 300  
gctgagacaa aaccagttt ctctcctaaa cnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 360  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnaccaa gacaatgagc ctctcaagc 420  
cgatgggaga ccctactgct gaagtgaccg atgaaaatag ggatgatgct cagtcagaga 480  
agagcaaagc tatggaggc 499

<210> 4164  
<211> 474  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-F1  
  
<400> 4164

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tcacccgact ttaatgatta aataccctga ggctgtagac ttctatgact attacaaggg 120  
gcagatggag ccctgggatg gacctgcttt ggtattgttc agtgatggaa agactgttgg 180  
agcttgctt gaccgcaatg gacttcgacc agctagatat tggcggacaa gtgataatgt 240  
tgtctatgta gcctctgagg tcggagttct tccaatggat gaatcgaaag tcaccatgaa 300

gggtcgtcta ggacctgggt atgatgatat ctgttgactt agagaatgga caggtatatg 360  
 agaacacaga agtgaagaag cgggttgcat catataaccc atatggaaag tgggttagtg 420  
 aaaacctgcg aaacctgaag ccttccaatt anctctcgtc agcgattctg gana 474

<210> 4165  
 <211> 56  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-052-Q1-E1-F11  
 <400> 4165

acgcgtccgn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnngg 56

<210> 4166  
 <211> 464  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-052-Q1-E1-F2  
 <400> 4166

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 ccaaaagagc ttttattaat acaccttact cgtgaccgga ttcgcagagt tcacgagctt 120  
 ccgagtcaaa aacactctaa aacaaaacca tgactttgtt ccatagactc gatctcatcg 180  
 atccgtacac gtgtacacca ctcatcgctc gtgaaacctc cattgttgaa cttcatcat 240  
 tgttcctagg gtttccttcc ttcacgcagc aagacattga agatctcttc gagttttcat 300  
 cacctaatec tctcgatcta ttcgaaaccg tgacggatct ggttaagatt aagaaatctc 360  
 cgtcgtcttg caagtacaag gtgattcgtc ggagattaga gccggagtat ccattgaagg 420  
 tatecttggt gaacgtgttt ctgaattggg gatccaangt ttgg 464

<210> 4167  
 <211> 480  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-052-Q1-E1-F4

<400> 4167

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cgacagttct tgggaagtat gttattccaa ggatgattta cgacgacgtc gttcacgtcc 120  
tgcatttggt tcattattac gtacattatg ttttaaatta cgtgatgata ctggattatc 180  
gggaatcttt ttgatgaac atccagagaa taaaaatcgt cctcctgatt ttcttctttt 240  
cacagcactt acaacactta tcaatagtga cacggatgaa ggacgacatg cattagaagg 300  
tttactttgt atcatacaat taccacatcc taaaattgcc aattttattg tagatcaaac 360  
aacattttgt atgcgattgg taaaaggatt agaagaacga tataaacgtg taccattgac 420  
atttgatacc aatgtgactg aattaccaat atcacatcca cataatggcc ccaaggctgg 480

<210> 4168

<211> 458

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-052-Q1-E1-G1

<400> 4168

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gggaaaatta gatccatagt tgatgagata aagcaagtta tgaccgcaag ctctagtagg 180  
aagcgagaga ggggagagag ggcccatgct gaagactttg acgctgaaga gggagagcctt 240  
attaaagagg aaaatgagca agaggaagaa atttttgatc aagtcggtga aatattggga 300  
acattgggta agacattcaa ggcctcattt ctacctttct tcgatgaact gtcctcttac 360  
ttaactccta tgtggggaag agataaaaca gcggaagaga gaaggattgc tatatgcatt 420  
tttgatgatg tancaaaaca atgccgtgaa nctgccct 458

<210> 4169

<211> 448

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-052-Q1-E1-G10

<400> 4169  
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cttgatttct aaaaaggaga agaagagaag agaacgcgat taccttgatt caccctcctc 120  
cttcaggttt gggaggctcg aatactcagg aaatgaaagg ggcaagtggg gctgttaaga 180  
agaaacccca ggtgttgaac gaagctgggt aggcggagac ggcgggtggaa acagtcggag 240  
aaagccggaa aattannnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300  
nnnnnnnnnn nnnnnntcg attcttcgag agattggtga tgataggcct acgnnnnnnn 360  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 420  
nnnnnnnnnn nnnnnnnngg cgtgacct 448

<210> 4170  
<211> 411  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-G12

<400> 4170  
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aaaaagcagc ttgttcaaga agaggaacga gtaaaggga aagtcagcat ganggtgtac 120  
ttgtcataca tgggtgctgc atataaagg gctctgattc ctcttattat actcgcacaa 180  
gctgctttcc aatttcttca gattgctaag taattggtgg atggcttggg caaatcctca 240  
aactgaaggt gacgaatcta aagtggatcc tactctgctt ctcatcgttt atacggcttt 300  
agctttcngg agctctgtgg ttcataattg ttccagctgc tctggttgca acttttggtc 360  
ntgcaactgc acagaaactg ttcctaaata tgcccaaaaa ttngttcca a 411

<210> 4171  
<211> 430  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-E12

<400> 4171

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 acttcacaag agtataagag aatgatgcct gggaggatta ttggtgtag tgttgattct 180  
 tccgggaagc aagctttgcg tatggctatg cagactaggg aacagcatat ccgcagggat 240  
 aaagctacca gcaacatctg taccgctcaa gccttgcttg caaatatgac tgctatgtat 300  
 gctgtttacc atggaccana aggcttaaaa tctattgcac aacgggttca tggctctgct 360  
 ggtgtatttg ccttaggatt gaagaaactg ggaactgcac aagtccaaga tcttccttc 420  
 tttgacactg 480

<210> 4172  
 <211> 384  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-052-Q1-E1-G2

<400> 4172  
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 ttcaccggaa aaggagatag tgaccgaac ttagacacgg natagcagt caaactcaga 120  
 ggaaaatgca agccanctga taccacaacg gctctagaaa tggatccagg aagctttaa 180  
 acgttcgatg aaagttactt caagcttggtg tctcaaagaa gaggattgtt tcaatctgat 240  
 gcanctcttt tagacaatca anaaantaan tcttatgttc tcaagagttt gaatagnan 300  
 ggggtctactt tctttaaaga ctttgggtgc tccatggtaa aaatgggtca gattggant 360  
 ttaacgggtc angttgggga aatt 480

<210> 4173  
 <211> 477  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-052-Q1-E1-C1

<400> 4173  
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tccacttaaa accaaccacca attctcacca aaaatcgcaa aaaaagattt caactttcga 120  
 taaaccaga tcgaaaaatc agatTTTTcc aagatcaatc agagagttag agatggagta 180  
 taataacaac aatcagcaat ctttttggca gttcagcgac cagctgagag ttcagacacc 240  
 gaatctagcg aatctgtctc tcaacgactc gatctggagc acaaactctg tcttcaaaga 300  
 gcgtcgaaac ttagacatag cgcgccaccac cgacaagaac aacaaccaga tcgactatta 360  
 tcaagaagaa gacaacttcc gacaacatca attccaactg gaactggaag tcttctgggt 420  
 caaacaacga catgggttta ggattccggg cctgtggggt taaaatccac ccgggng 477

<210> 4174  
 <211> 449  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-052-Q1-E1-C10  
 <400> 4174

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 tcaaagacag ttctcgggaa gctgtccggt tcccaaatg tagatccttt attgaaggaa 120  
 acaaagtctc taggaagatt atctgtttct cagaactctg atccttcgac aaaagaaaca 180  
 aagtccattg gaaggtcac aacatcacia aattcagagt cctcgatgaa ggaatcaaag 240  
 cctctcggga ggttgtcagt ttctcaaat tcagacgttt cttaaagagtc aaggacgttt 300  
 tcatccacag gaagtttacc aaggcactcc tcatagggtc agttcgacca atgtatcaaa 360  
 agccacttcg ggtgtttcaa cagccgtctc taatgctgca acgtcaagga ggaattttac 420  
 aaaagctaac ccaaaggcga atcctgtca 449

<210> 4175  
 <211> 447  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-052-Q1-E1-C11  
 <400> 4175

acgcgtccgc ccacgcgtcc ggaaaaaagt ggaaattttc ctttaaattt agtttaaaac 60  
 tcatacaaat ctttctactc gaccactggg actctccgta agctacttgc tgaattcgat 120

tattgattttt gggcgtagaa gaagatgaag gcatcgatga agtttcgtga agagcaaaag 180  
cctcttttta gggctaaagt tcctttaagc atcttaggtt taccctttca atctgggaat 240  
cgtcgccgga gaatccaagg agtcagttct caatctctcc actttcttcg aatctggccc 300  
ttctctcaaa agtcgcttac cgtccaaaag attcgtggaa tcctttctct ctaatcgta 360  
aaaccggatc gggatcgttc gggtctccga tttcaagctc tatgctcatg agcgcgtaat 420  
tcaatctcct aagtcaagga aacccta 447

<210> 4176  
<211> 407  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-C6  
<400> 4176

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ttccggtgaa aagccgtccc cgtcgccgtc ctgatcttac cttaccgctt cctcaacgcg 120  
atgtttctct cgctgtacct ctctctctcc cactacttc cggtggttcc ggtggctcta 180  
gtggatctgc gccgtcttct ggtgggttcgg cgtcttcaac gaacactaac agctccatag 240  
aagcgaagaa ctattcggat ttaagtgaga ggtaaccgt atcggaagcg gagcaagtgg 300  
gaacggtata caaagtgatt caccgtccga gttctcgtct atatgcactt aangtgatat 360  
acggtaacca cgaagagact ggtgagaacg tcagatcngt agagaga 407

<210> 4177  
<211> 406  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-C8  
<400> 4177

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ttggagagag tgagtgtaga tggacctcat atcacagtct cccaactcaa aaccctaate 120  
caagatcagc ttcagatccc tatccacaac caaaccttat ccaccaatag aaaccttctc 180

ctcgctaaga gcccttctga tttcctagcg ttcaccgaca tggccgatcc taacctccga 240  
atctcgtctc tcaatctagc tcacggctct atgggtctacc ttgcttacga aggtgagcgt 300  
acgattcgtg gtggctcctgc tgtaacgcct gctgggttctt tcgggaggaa gatgaccgtc 360  
gaagatctaa tcgctcgaca gatgcgcgtc ggtcgccaaag aagaan 406

<210> 4178  
<211> 466  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-052-Q1-E1-C9  
<400> 4178

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tcggcatgta catgatcgat gaagccaata tagagacaca tggttttgat ctctctgggc 120  
atctgaagca ccctgcaaaa gagccaagct gggcaagctg ctatgctggg atcgagtagt 180  
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gaggctgggc tatggggccc aatcattctg ccatgggcag gttggattag gggaaaagga 300  
ccctcacggt tgggtgacta tgaaagggtg tggttccaga aacaagttct acagatataa 360  
gcctgcccta agttacatgc gggtttgga catcaaccan gaattgcact tgattaaaat 420  
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<212> DNA  
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attctttgtc tcgttctcac cgtcatcgtc ttacgtggca caatcggagc cggtaagttt 180  
ggtacgccgg agaaagatat cgaggagatc cgtgagcatt tcttctacac gcgtaaacgc 240



ggcgagcctc accgtgtcct cgtcgaggtc tcttccaaaa cgacgtcgtc cgaagacgga 300  
 ggaaatggtg gtaacagcta cgaagacctt cgatatcaac aaagctaatac gttgatgaag 360  
 gagacgaaaag aggaaatctc naagaccggg actaataaaaa ccttaatccc cttgggtccc 420  
 aaagatctct gattgggaat gaancagaga ccttaatttg 460

<210> 4180  
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 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 gaaaaatggt ttccttattg gagattgttg tatgtttggt gtcaagttcc atgggattga 180  
 acctgctaaa cccggaacag cggaaagttt tagcttaata gagaagcctc ttaatcacag 240  
 agtcacttgg atgatgacca tgttctcgtc cttcaaccct ggaaacgttc atcagtctaa 300  
 tgaatttgtc gttggaaccc ggaaatggag aattaaagtt catccaagag ggtctatggg 360  
 tgaaaaagac aaatcatttt ctgtgtatct atcggcacta gggtttgtca ataatgcacc 420  
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 ncccatt 487

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atttccttga ttttctccga ttgtggtcaa tctggaaaat tattgagaat ctctccctca 240  
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 gctgcgagaa atttgagaa gatggcttct attgatgctc agctcaggct tcttgctcct 360  
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<210> 4182  
 <211> 416  
 <212> DNA  
 <213> Arabidopsis thaliana  
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 tctttcttag accaaagact tgcagtgggtg taccagtgga tccagagatt caagtcactc 180  
 atcactctcg acccttataa cgtgaccaag acatggattg gttcagacat ctgcagttat 240  
 agaggcttcc actgtgacaa tcctcctcac aacaaaaccg cagttactgt tgcttccatc 300  
 gatttcaatg gctttcagct ctctgctcca tccatcgaag gatttatcga tcaattcgct 360  
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<210> 4183  
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 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 atcgccttct tttgtcaggc ttccctcctg aaaggtgtta cagagcagga ttgtgatagc 180  
 tgctgcttcg tctgctggctg gtaatccaca gtctgatgct gactttaatc cgtatgaggt 240  
 tcttggtgtt aaccttatag agggatttga caagatcaag caaacttatg gaaggaaact 300

taaagatgct cagaggagcg gtgatgaagc cactgctgct ctacttgaga aggcatatga 360  
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<210> 4184  
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 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-052-Q1-E1-D8  
 <400> 4184

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 tgattttttt ttttctgtga ttgcgacagc tagagatcta tctctgggtg attttgggtt 180  
 tatgttccat ggcggatcgc ggatcttttcg gatttgctcc tcgattagat atcaagcaat 240  
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 atcatcagaa gtttcatatt gcgtcagagc ctcccaaccg accaccaggt gggttcactct 360  
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 <213> Arabidopsis thaliana  
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 agagtacctt cttcttcaca cacataaaaa gagacggtac caaaaaataa aaacagagca 180  
 aaccacaaaa atgggggaagc atttattccg atcatctcct ccaccggaga aaccaacagc 240  
 tcatctctct ctgcgggaat cagctgttca agaattgtatg agcaacatca acaccgtcat 300  
 atcaaaatgg acttctccgg ctgcttcttc ctccgacgac ttctcttctt ccaccaacag 360  
 tcgtcgtgaa gcagaggagt ttgttacagc cgttagacat ctacaaagca cgatgcatcg 420

tttggtttcc gttaaaccctt cctcggggga aactaatcta agcccagaat ccaaaggna 479

<210> 4186

<211> 447

<212> DNA

<213> Arabidopsis thaliana

<223> Clone ID: LIB22-052-Q1-E1-E11

<400> 4186

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tgggttcccg gagattcaca aagccacatc acccactcaa accctccact ctaaccagca 180

agactgccat tgggtatgaag aaaccatcga tgatgatctc aagtgggtctt ttgccctcaa 240

cagtgttctc catcaaggaa ctagtgaagta ccaagatatt gctctgttgg acaccaaacg 300

ttttggaaaag gtgcttgtga ttgatgggaa aatgcaaagt gctgagagag atgagtttat 360

ctaccatgaa tgtttgatcc atcccgtctt ctttttccat cccaacccca agactgtgtt 420

tataatggga ggaggtgaag gctctgc 447

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<211> 450

<212> DNA

<213> Arabidopsis thaliana

<223> Clone ID: LIB22-052-Q1-E1-B9

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gtcatagatg agtatggggc tgatgctgtg cgattgtacc tgataaattc tccggttgta 180

cgtgctgagc cactacgctt caaaaaagaa ggagtactcg gtgttgtcaa agatgtattc 240

cttccatggt acaatgcata tcggttcctc gttcagaatg caaagagact tgagactgaa 300

ggtaggtgtg ccttttgctc ctactgatct ggcaactata caagtcagca aacattcttg 360

atcagtggat tcaactcagct acgcagagtc ttgttcggtt tgtccgcgag gagatggatg 420

cctatcggct ttacactgtg gttcctcgtc 450

<210> 4188  
 <211> 439  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-050-Q1-E1-C9  
  
 <400> 4188

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 tctcttctcc acaccgctgt tgatcttctc aatganacta agcttganna tgaaatcaag 180  
 tcatgggttg cgtttgctgc ccanaagggtc gttgaantga acgctttggc caaggctttg 240  
 gctgggtcata angacnange tcttttctct gccaatgctg cggctttggc ttcaaggaga 300  
 tcttcccaaa gagtcaccaa cganggggtg ccagaacgct gctgctgctt tganagggat 360  
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 caatctccca natectacc 439

<210> 4189  
 <211> 412  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-050-Q1-E1-D10  
  
 <400> 4189

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 tganatcttg aatgctgaca ataatcctgn aaggattaca ataatcacia gaatgggagc 180  
 tgagaatatg agagtgaanc ttctcattt gatcagagaa gtgcgacgtg ctggacagat 240  
 tgtgacttgg gtcagtgatc caatgcacgg naacaccatt aaggctcctt gtgggtctcaa 300  
 gactcgcccc ttgacgcca tcttggtga agtgagagct ttcttcgaca tgcacnagca 360  
 acaaggtacc cccccngac ngaantcngc gnggnaagtg ggggggtcag gg 412

<210> 4190

<211> 412  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
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 attccttctc tttcccatat acctccaaac ccaccaatct accgttgact ctctcctcgg 180  
 ctcgttctgt ggcacgcgac atttctcatg cggattcgaa gaaagagctt ctttaaggatc 240  
 cggatgcggt gtggaagcga tacctcgatt gggtttatca gnaggaaaga gcttggggtg 300  
 tatctggata ttagtcgggt cggatttacc gatgagtttg tggctgaaat ggagccaagg 360  
 tttcaagctg cgtttaaggc tatggaggat cttgaaaaag ggtctatnag cg 412

<210> 4191  
 <211> 411  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
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 ggagctattg tcggaatagt gatcggtctgt ttcgtcttgc ttctcgtgct tttcttgatc 180  
 gtgttctgtc tctgtacaaa gaagaagaaa gagcaagtcg tccaatcgag aagcatcgaa 240  
 gcagctcctg ttccgacctc atcagcagcc gtggctaagg aatcgaatgg tcctcctgcy 300  
 gtggtggcta atggtgcacg tgaaaatggg gtatcaaaga accctgctgc agtgagtaaa 360  
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<210> 4192  
 <211> 448  
 <212> DNA  
 <213> Arabidopsis thaliana

<223>        unsure at all n locations  
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 tgttcctcgg tttccaatgg gagcttcgaa gttcgacggt tggacctctg aacctgcttc    120  
 tgtctctgag aggcgttcca agctttttaa cgaaatgggt cttagccgtg acccggttct    180  
 ctcccgggta aaaccggttt cagattcttc cagctccaaa gataccggag ccgccgggctt    240  
 cgagatttct cgatcgatct cgtgtaatca attggctcgg cgagatcatg gagagtgttc    300  
 tgaaagtgtc ggcggttgtg cttcntgtat cgtgagatcg aaatcnggac attaccacta    360  
 ngccaatgtg gtgacgtga cgcgcgatat acgtctcctg ggtaatccgt gttcttgttc    420  
 cgtctcctaa actctctggt catcantic    448

<210>        4193  
 <211>        495  
 <212>        DNA  
 <213>        Arabidopsis thaliana

<223>        unsure at all n locations  
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 aactggatt tcagtaaagt ggatttgc atgggtcaaa cctctactag cagcgtcctc    120  
 accaattccg ctccacgag cgctcccga ccggcgatgc aggaacggga gattgacctc    180  
 tccaaactcg atatgaagca cgtcctcgct cagggtactt acggcactgt ctaccgcggt    240  
 gtctacgccg gncaagaagt cgcagtgaat gtgttagatt ggggagaaga tggttacgcc    300  
 acaccangct gaaactacag ctncctgtgc ttccttcgag caagaggctc ccgtctggca    360  
 gaagctcgat natcccaacg ttaccaagtt tatatgagca tcanggaac ctctgatctg    420  
 cggntccctc ctgctgntga tanctggcng gcngtggtaa cnggtgcana tccctgcgan    480  
 gggcctggtg tggttg    495

<210>        4194  
 <211>        386  
 <212>        DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

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atcttccatt gctccagtg cttgctgtta aaactgatga tactgaagaa accagtatgg 180

ctctttgttt ttttctttgc tttgctttac agtttacata gctttatgat tcttaaggtc 240

taaattcttt ggaatatagt cttttcttaa aactgctagc tgtgaatcca cactggtgat 300

gcatttctga tccaagatgt taaacaccca tattgagacc ttgaaaatgt cataaggaaa 360

gtaatggaga cacatacgtc antttt 386

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<211> 499

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-050-Q1-E1-E3

<400> 4195

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ccttcccaat tcttccgttc aaacaaattt ctccaaacc aaaccctaatt ttcctccgtc 120

tgtgaaatca agggttttct ctgatctggg ttttgatcag aaatcagatc taggtttaat 180

tttcgaaatc aaattatgag gaagagagaa agagagaacc cttgttcgat ttgtgggcat 240

taccataagt acgaggaagg agaagtatgt ggagtctgtg gtcactgtat gcctgtttct 300

tccgatacgg gtggcgccgc aacaagtcca cgtcagtgtc tttccgtcgg agattctccc 360

tgagtttctt tacctcggtta agttacgaca acgcttctcg ctctgagctt cttaaagact 420

caanggaatc tcttccgtgt tcttaataac gggttcctang ngccangaat cctctaacag 480

ggaattcaat tcaacntta 499

<210> 4196

<211> 451

<212> DNA



<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-050-Q1-E1-E4

<400> 4196

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aaaaaccaag tcttgtaatg aggagctgtc cactgttgta aagtaagtca ttaanatgga 240
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ttctagcaga tattgtatgt cacctttggg atcaagtaaa gatatggagc agcgtcctgc 360
attgaagtca gggtagcaag gttctatgga gtatgacatt gatcaagctt ttccaagtct 420
ataactataa aaccatcaac ctaagaagag t 451

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<210> 4197

<211> 430

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-050-Q1-E1-E5

<400> 4197

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aagaacatcc agagcaatct gaatctaacg acgacggtgg atggagcttc ggtggtctga 180
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gacatgcgat tgatgagctt gggaacacng tgctaaaagg tacggctgan attantgctc 360
aaggtaagga agcgatttta gccggctggt aangnatctg aatcctctga tagcagtagt 420
agtcnagagt 430

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<210> 4198

<211> 416

<212> DNA



<223> unsure at all n locations  
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<400> 4200

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tcgtttcttc attttccgcy tgttgattgg taaaagggtt taatcaaag gttggaggag 180
gagttatcca gcaaattctt aggaggaagc ttcactccca atcacttgca actccggttt 240
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ttgccttggt gggtgctggt gttacaggac tgttgagttt ttctacanta gcatctgctg 360
atgaagctga acatggggtt ggagantcca gaagtaccct tggcctcaag aatggcattn 420
cttagctcat natgaccaag gcttcgatcc gtccgtgggg catcaagttt atcaagcaaa 480
gtcctgtnga atcagg 496

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<210> 4201  
 <211> 438  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4201

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agagccaaga atactatgaa catcatgctt accaagctcc ttgacgctgc agccggtggt 240
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ggtaaact actttgggtc tcaaagacat cccacggcc tctgctgact actccaactt 360
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acggacacaa gttcgngg 438

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<210> 4202  
 <211> 447  
 <212> DNA

<213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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aggacagtcc agtgataata gaatgctcag actttaactc caatggcaaa cacagtctga 180
ttgggaaaagt tcagaaatcg ctttcagact tagaaaaact tcatttggcg ggccaaggaa 240
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tgnngacaagt ttaccgagac tgtccaccac acattcctag aagtacttgg catctggatt 360
tgagttaaac tttatggtag caatcgattt cacagcttca aatggaaatc cccgcctccc 420
ctgaantcnt tgcactacat tgatcct 447

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<210> 4203  
 <211> 469  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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tcacatcatg actatatctg cgagagatct catctatagg atcgaaacga aggttttggt 240
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anaccgcaat agaaaaacca atttcccaac ggaaacggta atcgcaatca ttgtgcttgc 360
aatatttatc tcattaagca tggtcgcttg tttcttgac aaaacattct atagagcaga 420
ggttgaggcg gcaagccaag aagtgtttca caagtagaac ganggggtg 469

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<210> 4204  
 <211> 488  
 <212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-049-Q1-E1-H11

<400> 4204

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cggccctaataatggcttgc agagcanaag aacttgtgtc gttaatcttg tanaagatct 120

gtaatcccaa aaggtctgat tccaaaattg aggaacatgt ggaagaagta gaggatttga 180

aagcagaggc ataactcttt aggtctgggt ccaaaattga gaagcatgtt gaagaantac 240

aggatttgna agcagaggca gaactcttta ngttgaaagc aatctcagga acagagggaac 300

tgaaagcagt ggcagatgtc aagagggttga gaacaatctt aagaanacaa tagtggggaac 360

ctcagaggag tgtaagggtg agatgttgaa agaagatctt tttcttcctt cggatcttgt 420

acgtctcata ntgtctcgtc tttctttcaa agacaacaaa cgctcttcta ctgtttgcaa 480

ggcanggg 488

<210> 4205

<211> 482

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-049-Q1-E1-H2

<400> 4205

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gtctggatac gaagcttatac aagtcagtca caacttactc ttgtcgcattg cttacgctgt 120

tgacgcattc agaaactgca aacagtgtgc tggaggtaaa attggaattg cacacagtcc 180

ancttggttc gaaccacaag accttgagca tggttgaggt tccattgaac gtgtgcttga 240

tttcatacta ggatggcatt tggctccaac aacttatgga gattatccac aatcgaatga 300

ggatcgtgtc ggtcatagat tgccaaaatt cacagaagct gagaagaagt tgccaaangg 360

ttctacagat tacgtnggaa tgaattacta gacttcagtg tttgcaaaaag aaattagccc 420

tgatcctaag agtccgagtt ggacgactga ttcnccctgt tgattgggat ancaagatgt 480

gg 482

<210> 4206  
 <211> 438  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-049-Q1-E1-H6  
  
 <400> 4206

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 nattccttcc gaccaacaag cttacctcca gcagcancag tcgtggatga tgcagcacca 180  
 gcagcaacaa caaggtcagc cgcttcgagg atgggatcag cagtctgcac ngtcttcttg 240  
 tcaaccacag cagcagcatt atgggtgggtg tggatctcag aatccaggat cagntgggtg 300  
 agatccggtc cctgtggntc ggtgacttgc aagccatgga tggatgagan ctatctcatg 360  
 aacgtctttg ggtcgtactg gcgacgtac ancagntana gttattccca ntagacaagn 420  
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<210> 4207  
 <211> 414  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-049-Q1-E1-H9  
  
 <400> 4207

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 gtttctgtat tcggacgcaa gtcttctct cttcaantt gggtagcncnc anagttgtnt 120  
 cancgatggc ttacnanaaa gagcttgatg ctgctaagaa agctgcttca ctgctgctc 180  
 gtctctgtca gaaagttcaa aangctttgt tgcaatcaga tgtgcaatca aaatctgata 240  
 aanagtccag tgaccgttgc tgattatggg tcacaagcag ttgttagttt agtcttanga 300  
 aaaagagctc aagttctgaa ncttttcat tgggtggctga agaggactca cgcnatctac 360  
 ncaaggatgg ttctcangag actctggagc gcatcacaaa actcgtggaa cgan 414

<210> 4208

<211> 447  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-050-Q1-E1-A6  
  
 <400> 4208  
  
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 agtcgaatct ctatttaatg catttgcaac cgctgcgttc ttcaagttcg tagtcttttc 180  
 gatttttgag atgagatata ttctggctat atggaaagca acccgtcctt ccaatagcgg 240  
 agagggttgg gaaacaatga ggagagaact gtcctttctg tacagtcggt tctatgggat 300  
 ccttcttgga ggcattttga nantgtacca agttccacaa ctacatgcan gccgattctc 360  
 cntctcatgt actcattttg gataccacan atagtcgcca aatgtngtcc ggggattcag 420  
 gaaagnctct gcacccatat tacatct 447

<210> 4209  
 <211> 439  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-050-Q1-E1-A8  
  
 <400> 4209  
  
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 acggtgctgc agaggtaaag tcgcatccct tttttcaagg agttgactgg gagaatcttg 120  
 ctttgcaaaa ggctgctttt gttccgcaac ctgagagtat aaatgacaca agctatttcg 180  
 tatcacgctt tagtgaaagc agttgcangc gatactgaaa ctggtaacaa cagtgggtca 240  
 aatccagatt caggagacga gttggatgaa tgcaccaacc tgggagaagt ttgattctcc 300  
 gccttattat ctctcgctca ttaacttttc tttcaagaat ttgtcacaat tgggcttcan 360  
 tcaancatga tgtgctagtt gcaaaaaggc ttcagntana gggagganga gactcacct 420  
 tttaaaggcca tgggnacgt 439

<210> 4210

<211> 435  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-050-Q1-E1-B10  
  
 <400> 4210  
  
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 ttcggagggcc gtggagggtcg tggagatcgt ggagggcgtg gacgtggagg ccgtgggtggt 180  
 cgtcgtggag ggcgtgccag tgaanaagag aaatgggttc cagtgaccaa ncttggtcgt 240  
 ctcgtggcgg ctgggtcatat caagcagata gagcagatct atcttcattc actcccggtt 300  
 aaggagtacc agatcattga tatgctcatc ggtccaacat tgaaggatga ggtaatgaaa 360  
 atcatgccgg ttcagaaaca aaccanggct ggtcaaagga ctagattcaa ngcctttgtt 420  
 gtcgttggan atggg 435

<210> 4211  
 <211> 419  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-050-Q1-E1-B2  
  
 <400> 4211  
  
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 gcttttaggtt ttgacagcta catggnaatg cgccatgggtg ctggccccac ctctctgtct 120  
 gatgatatgc agaattctga cataaacaag acanatacac agagacttgg ttgttacttc 180  
 tgcaacgacg tggttgcacc tcangattca atgactgac gaactctaga ccaacaatgc 240  
 actgttacac gcccggtct agctcctatt gcangagctc tcgccgttga actcttagtc 300  
 ggagtcttac aacacccact tggatatcaat gcaaaaggcg acanttcgag cntgagtaat 360  
 acacggaaan aatgatgaat tcgcctcn cn gggatantac ctcatcagat acngggctc 419

<210> 4212  
 <211> 423  
 <212> DNA



<213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-050-Q1-E1-B4  
 <400> 4212

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ctttgtcgtc gtcattcatcg tctccggagt aggttgacaga aattcagatc tgaactctca 120
gacgaagctc cgattcttact gagacatttt tgctcgattt gacttttcgcc tttaaagctt 180
ctcagagatt attgtactga attaatggcg aattctcgtc aatattatcc atctcaagat 240
gaatcaatgt ccccgacttc tgtgangatc aagggaatgg gaaggtcctt ccagatggac 300
tgaggctactt gggacctgaa atggctgcat cagtgtcttc tactaggagc tctaagcaaa 360
ttgatggaca tggttggtggt tccacaaagg gcttgaacat acaatggggg agttcaaatg 420
att 423

```

<210> 4213  
 <211> 445  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-050-Q1-E1-B8  
 <400> 4213

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attctatttc ctaccgggta agcgccataa gcttcttcgc acctctcaag atgtagtagg 180
caacaagttt ctggagaatt catcattggt attgccagag tcatttctctg gtagtctctt 240
atacagagta atagatgaag acgaccaccg tacaagtaga ctcgtagagt tcaaagatga 300
acctacttgt tccatgtttc ctactaatga gcaaaacagc agcaagaact tatgaatcta 360
aaccagcaat ttattccacg gaagtatcct ccatttgga cttacatgag acggcggcac 420
cacgctctac tcgtggctct ctctc 445

```

<210> 4214  
 <211> 512  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-050-Q1-E1-C4

<400> 4214

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ntgtttacgc tgccggtacc ggggtccaaaa ttcacgggggt cgacccacgc gtccgggaca   60
aatccagcta ctaagttnc cttgggataat caatcaaaga ctccgcccgc aagtcctaag   120
tccaacctca aaactaagta nggaggggaat tcaagattca agcttctgac caatcacctt   180
caagttccag tggagatgca cagagccgta ctgatcggat tgtgttcaaa ctctttggga   240
aagagccgaa tgatttttcca gttgccttac gaggacagat tcttaactgg ttagcgcata   300
ctccaactga tatggagagc tacattagac ctgggttgtat cgttttgacc atttatcttc   360
gtcaagatga agcttcttgg gaagaacttt gttgtgatct gaagtttcag cttgaggagg   420
cttctagatc tttcagatga tnccttatgg actgatgggg tggctttatc ttaagggtgc   480
aaaaaccaac tcgcatttgc gttaatggtc ag                                     512

```

<210> 4215  
 <211> 440  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-050-Q1-E1-C6

<400> 4215

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gagaagcagc cactcgtttc ggcgggttttg gtttctggag accttctctc aataaaactcc   180
cagatgcttc tcaggaaaat atccaagaac ctgatatcat gggactcaaa gcacaagctt   240
tcgagctaca aagagaacta attgttaaag aacgcgaaac gctaagaggt gttgaaggag   300
cttgaggcga ctaaagccac agtcttaaag ctgcagcaga ggaatgaagc ttatgaggag   360
gacacgttga gagaagaagt tgacagtcac atcaagccag cgggtgtggt tctaaaggat   420
ttaagccagg cgaagatgaa                                     440

```

<210> 4216  
 <211> 452

<212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-050-Q1-E1-C7  
  
 <400> 4216  
  
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 tttgtccttt cccatatgat ctcatcagc gtgagctcaa gagatatcca aatgcggaga 120  
 tcgtttggtg ccaagaagag gcgatgaaca tgggagcatt cagctacata tctccacggc 180  
 tatggacagc aatgagaagc gtaaacagag gagatatgga agacattaag tatgttggtc 240  
 gtggtccttc tgctgcaact gccacgggtt tctatacttt ccatgtcaaa gagcaagccg 300  
 ggcttgtcca gaaagccatc ggaaaggaac ccatcaatta agaactcttc ctttttaaata 360  
 gantttctcan actgataang anaaanngga naaaactttg aaatnagaaa ctttgggggtg 420  
 atgcaanaag tgcgaaacaa cactgtcaan aa 452

<210> 4217  
 <211> 431  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-049-Q1-E1-H1  
  
 <400> 4217  
  
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 gatcaagatc tctcgagtca gccttgtgnc taactcagtc gaancactcg ttctcccact 120  
 cactttcttt gatttactan ggctaaaact caatcccata gagcgagtta ccntctacaa 180  
 actcaccgag tcatctcgtg actccttctt ctctccatc ntccccaaac tcgancaatc 240  
 cctcncctc gtcctctccc acttctccc actctccggt cacctcaaata ggaacccccca 300  
 agatcctaaa ncacagatag tcatcttcnc caaatanact gtntctctca nagtgggtcga 360  
 gtccgaagct gacttncgt atatccgcta gcaaanaact tcgtctggag aatgaattac 420  
 gtctcttctgt c 431

<210> 4218  
 <211> 499

<212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-049-Q1-E1-E3

<400> 4218

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tgttcattgg cgtaacttgg ccttaatcgg tctcattcca tgtgcgttgc aagttgtgac 180
tttgttcttt attccagagt cccctagact actgggaaaa tggggacatg aaaaagaatg 240
tagagcttca ttgcaaagtc ttcgcggaga tgatgcagat atctctgaag aagccaacac 300
tatcaaagaa accatgatct tgtttgatga aggacaaaa tcgcgggtta tggatttgtt 360
tcagagaaga tatgctccat ctgttggtta tgggtgtggg aacaatgcct cctacaaaca 420
actcccctgg gaagcctcaa ggacttaang ttactaatgt tccggtaacc ntattttgat 480
aaaagggagg gggtttccaa 499
  
```

<210> 4219  
 <211> 398  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-049-Q1-E1-E5

<400> 4219

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ccgccttgcc atgaaagagc taaaaacaga tatagcatgt ttcaactttg ccggcatccg 180
tgccatcaen ataaactccg acgagatcgc tagagaagcg tttagagagc gagacgcaga 240
tttggaaga cgggcctcaa cttttcatca tggagacaat cggagacaat tacaaatcaa 300
tgggaatttc accgtacggt gaacaattca tgaagatgaa aagagtgatc acaacggaaa 360
ttatgtccgt taagacgttg aaaatgttgg aggctgca 398
  
```

<210> 4220  
 <211> 418

<212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-049-Q1-E1-E6  
  
 <400> 4220  
  
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 actccggtat cggtccttgt agcttcatcg gagtaacctg taattctaga ggcaacgtta 180  
 cagagattga tctctctcgt cgagggttat ctgggaattt tccattcgat tcggtttgtg 240  
 agattcaaga gtctcgaaga aaactctctc tcggattcaa ttcactatct ggaataatcc 300  
 ccagcgattt gaaaaactgc acgagtttga agtatttgga tctcggcaac aattttattct 360  
 ccggtgcttt ccctgagttc tcattcttaa atcagttaca gtttcngtac tcaacaac 418

<210> 4221  
 <211> 426  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-049-Q1-E1-E7  
  
 <400> 4221  
  
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 attcatcatt atcgttatca tcaccatgtc actgtttcta aaagacgatt cgattcaaatt 180  
 ccgtgaagta tggaacgaca atctcgaatc agagatggct ctgattcgag aagtcgtaga 240  
 cgatttccca ttcgtagcga tggacacaga gttcccagga atcgtgtgta gaccagtggg 300  
 gaacattcaa aaccaacaca agagtancac tacgaaactc tcaanacaaa cgtcaacata 360  
 ctcaagatga ttcagcttgg actcactttc tctgatgaga aaggtaacct cccaacttgt 420  
 gggaca 426

<210> 4222  
 <211> 436  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> Clone ID: LIB22-049-Q1-E1-E9

<400> 4222

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gtggttatat gcactagaca acaccgggtc gatagcccg aaagaagctt gttggccaac 180  
gagcaagatt tagtgacagg tttgcctgga cagcctgatg tgagtttcag acattatgcc 240  
ggatatgtcc ctgtcgatga atccaacgga agagctatgt tttactgggt ctttgaggcc 300  
atggatctcc cgaaagagaa acctctagtc ctctggctta atggaggtcc aggttggtct 360  
tctgtgggat atggggcaac acaagaaatt ggtccttttc tcgtggacac caacggaaac 420  
ggacttaact ttaatc 436

<210> 4223

<211> 432

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-049-Q1-E1-F1

<400> 4223

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gctctgtaaa ttggagaagt tttgttagag atcaaattggc tgggatttgt tgcggtgttg 120  
ttggagagac tgaaccggcg gcaccgggtg attcaacttc tcgagcttct cttagacgga 180  
ggttagatct acttccgtcg atcaaaaattg ttgctgactc cgccgttgct cctccgcttg 240  
aaaactgccg taaacggcag aagcgtgaga cagtagtgct ctcgacgtta ccgggaaatc 300  
tanatctgga ttcgaatgtg aggagttgag aataagaagg ctanatcagc gggttacnaat 360  
tcaaattctg ttacgggaag cagagaattt cctttcccga tgtanctaaa natcggaac 420  
gaacgtcggg tt 432

<210> 4224

<211> 479

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-049-Q1-E1-F2

<400> 4224

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nnnnnnnnnn nnnnnnnnnn nngtcgtatt ggtgttacag ttgtacacga ttcacacgcg 180
tttggaaga tcaagacgca aacgctggag tcttatgtcc ttattgcaac ggtggattca 240
tcgaagagat tgaagattct tctaattcca ccgtcgcggc gattccggct tcgactccgg 300
aagttagatc ggttgaggaa acacatagat ctataattag acgtcgtaga tctaactgcc 360
ggacgtcctt taatccggta atcgtcttac acggcggagg aggaaggagg agcgggtgaga 420
gagttgagaa cgaagaaggt gacggagcta ctagagaacg acgagcttat gaagtttta 479

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<210> 4225  
 <211> 428  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-049-Q1-E1-F3

<400> 4225

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cacatttacc atacgggatt atgagtgcct tcatagttca aaacggggcca actccggnaa 180
cgagcttgcc atctccaccg tcgaatcttc cgcaatgcac tcgggatcct acgatctatg 240
actctcggac gactaacatt ganttgatc actaaangta anttaggttc gttttccatt 300
tttaaatatt gncggtacat ttacannntt cacatttttt gggaaatcaa tggttccata 360
atgtgttgca cacagattgc cctcaataan tgggcgnttt caacntcca aggcgaaacg 420
ggaanaag 428

```

<210> 4226  
 <211> 437  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-049-Q1-E1-F5

<400> 4226

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nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnncgaga aatcagacgg 120  
cggagaaggg aaggcgctgt ggggtgggaa ggacgggaag gtgtaccata gccacgatgg 180  
actcgacact cactcacacg aacccatcta ctctctggc tacttcagtc gccgagctcc 240  
tccgcttcac gaccgtaact tctctgagag agcttttacc gtcggtattg gcggtcccgt 300  
tggcactggg aaaacggcat tgatgcttgc tctttgtaga ttcttgaggg acaaatatag 360  
tcttgctgct gtgacaaatg atatattcac gaaagaggat ggtgagtttc tggggaagaa 420  
tggggctctt cctgaag 437

<210> 4227  
<211> 400  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-049-Q1-E1-F7

<400> 4227

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ctctcccaaa ataatagaca gtggcttgaa tcagaagacg gtaaaggcat cttctccaac 120  
taatcgggct ttattctctg aaactgatgg agcacgagaa tcaaaagcac ctgcagattc 180  
gcatcttcca tcttcatctt caccttcacc gggctcatcg aatttgctac cctctttgaa 240  
ctctgggagc gaggccattt ctactccaaa cgtgggtanct aatagctttg atgcagcggt 300  
ggctantgag aacgaagtaa ttgtaaatga aattgtccat gacaatanca ntagttttgc 360  
tgatagcttc gacnctaaca ctgggggatac aagcaacttc 400

<210> 4228  
<211> 448  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-049-Q1-E1-G1



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 cggctgagga aaaggaggaa gcttgtgagc agacatacgg ggtaaggcg ttgtacnaag 300  
 aacgctcctt gggaaacgtg tttcctgatt tttggnttaa tggatttctc aatggtttaa 360  
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ttanatgact tcgtccacta gcgtatacct taatctggct aggagggaaa tgggtatact 240

tgggtactcag tatgctgggg aaatgaagaa nggtcttttc antgtgatgc attaccttat 300

gcctaagcgt cntantctct cccttcagtc cgggatncaa tatgggaaaa aggatgggaa 360

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<212> DNA

<213> Arabidopsis thaliana

<223> Clone ID: LIB22-047-Q1-E1-H5

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tcttgaggct tggagtgttc cggatgtgct tcgacccctt tatgagtcac ccaaagtcgt 180

tgcacaaaaa atgaccattt ccgcgttgcg gtatatcagg caattagccc aagagtctaa 240

tgggtgaagta gtgtatggat taggaaggca gcctgctggt cttagaacct ttagccaaag 300

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tctaccacca acttgtcttc taattccgac cattcaccga acgctgcaga catcattgct 240  
cangaattct ccanagacaa caacagcaac aacancagca angatccagc tcttgttant 300  
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accgaatcta gcgaatctgt ctctcaacga ctgatctgg agcacaaact ctgtcttcaa 180  
agagcgtcga aacttagaca tagccgccac caccgacaag aacaacaanc agatcgacta 240

ttatcagaag aagacaactt cggacaacat caattccaac tggaactgga agtcttctgg 300  
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 gcttcaagta gatttcttaa ttatagaatt ggagctaatt atcaaatatt tgntgttaaa 240  
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 ggaccagcag aaacgtttgt ctgttcgtga cctcgctcat aaatttgaga anggtttggc 360  
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 ggtcaagtct gggaaagtga ttgtttccag aactatgtg gatatgtccc gtatcaaaat 180  
 cgaaggtcta ctgcagctt ttcctaaact gggttgaatg ggaaaacaag catacctata 240  
 tcgagacgga gaatgtgcga tatgtttatc aagcctattg nagctctgtt cctgnttctt 300

gttacancta aagcagagtt ancattcnag aaggacntgg gccannctta ctttgntcnc 360  
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ccggtaagca gccgtaactt gcaatcgatc gccgatctgg atccgttaaa ggatccctcg 180  
cagtccttga agatatcggc gtcctccgcc accgggaaca ggatccgtta ccgttcacct 240  
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ggaaatggat gcgcttagga atgagatcga tgcactaaag ccgaaagtga aaaacacaat  300
catgtcttcc caaggcattg actcgacaaa gaagaagaat ccttatgata tatatgttgg  360
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 ccatcaatgc ttcagtgagg aaaacgagta gatttgtaac agttgaagaa ggtttccac 300  
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 ggatggacca gagttaaatg cttaagtgat gcaggcttgt tcttggnac gcctgatgta 180  
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 <212> DNA  
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 cttatgggtca aaacggaagt cactttgaac caaagcctgt gccaccacca attccaaaga 180  
 aatgtgactg ggaaattgaa cctgctgagc tggatttttc aaatgctgca atgattggaa 240  
 agggttcatt tggtgagatt gtgaaagcct attggagagg aacaccggta gctgtgaaac 300  
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 gaaaatgaag ccatcgctct catccaccac gctattcact ccggcggttac tctccttgac 180  
 acctccgata tctacggccc tgagaccaat gaagttctcc tcggaaaggc tctcaaggat 240  
 ggggtgagag aaaaagtgga acttgcgacc aaatttgga tcagttatgc agaggggaaa 300  
 agagaggtca gaggagatcc tgaatatgta agggctgctt gtgaggcaag tttaaagagg 360



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<212> DNA  
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<223> unsure at all n locations  
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cgtggttctt ctcttctcgc tcgtcttcga gtttcttggt ttaccacaaa ccctgctagg 180  
aagaaaaacg aaacatgcaa tcattttcga cctatcaaag aagtaaataa ccaattaaca 240  
cacacaatac cacaggagaa gcttgaggat cttcaaatac atggaaaatt gggcagaaca 300  
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<212> DNA  
<213> Arabidopsis thaliana  
  
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<400> 4264

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acgngacgc gattttctga ttattagggg ttaagatctc gangttgagg agagcttgaa 180  
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cagactggga attacnaagc tganaacgga ttctggaagc gattgaatga gccagnantt 300  
gactctggag caatatatga tgctttatac gactatctac aacatgtgca ccangaaac 360  
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 aatgcgatt cgtcaagaat ctataacttc ccacagttcg attcccgtcg gattat 416

<210> 4266  
 <211> 446  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
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<212> DNA  
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 naattgggtg gttattggtg aanacgggat tggtgantcc gtgtgtgaac aagtatgtat 360  
 ttgggaacaa ttaacggatt tgggctgtca tacctcatag tagcaagctt tantcgaana 420  
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 aagtctacgc taacgctagt gtgttttttc acacatgtgt tagttcttta aatatgagat 180  
 gagtaattgc ttttgagttc gattatgata aatatgttga ccgtcaacat aagaaacctt 240  
 aaaacgttgt cgtttcgttt ttattcatcc cggtttaatt cagtttgggc ttggcgtnna 300  
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<210> 4269  
 <211> 372  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-046-Q1-E1-H9

<400> 4269

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 cagctccatc tccagaaaca tgggtgcagg tggaagaatg ccggttccta cttcttccaa 180  
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<223> unsure at all n locations  
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<400> 4270

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 tcgatacaat ctcaggatgg atttgagtat cgcttaatga agttttgatc tttgggttta 240  
 agttctacaa cagagtattt cgaggattgt atatattgaa gggnttttgt tggttaaggg 300  
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 <212> DNA  
 <213> Arabidopsis thaliana

<223> Clone ID: LIB22-047-Q1-E1-A6

<400> 4271

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gccggtgctc gatggtttaa aagctacaag actgatccgt tcgtatgaag aaactgggaa 240  
ctggaatgct gcaatagaag ccggagtaga tatatcgaca tcggagaatg aacaagtttg 300  
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<223> unsure at all n locations  
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<400> 4272

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ttcctgaaga agaaaaagcc tgagggttaa cactgcacct gggaatcaat ttccttaaat 180  
ctttactcaa aagatgagggc nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 240  
nnnnnnnnnn nnnnnngatc cattagatcc tagtggtaac attacaatca aatgggatat 300  
tatgtcctgg acggcagatg gctatgtggc tacggtaact atgaacaact tccaaatcta 360  
ccggcacata caaaaccctg ggttggacat taggttggac atgggcaaag aaagaggt 418

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<213> Arabidopsis thaliana

<223> Clone ID: LIB22-047-Q1-E1-B4

<400> 4273

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gtgtcaaadc tgtttattct actccgacaa gagaacaatt ccaaaattgc ttgtccacaa 180  
aacaattcaa ttctaccctc aaaaacccta taaatctcac cactcataca ctagattccc 240

CCCTTTACGC TTTNCGGGN CCGGTCCAAA AATTAACGGG TCNACNCACG CGTCCGAAAA

gagttcacac cgacttttcc gagtcttcat ctccaaattc taagtttctt caacttgaat 300  
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<210> 4274  
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 cantcngatt ctgcattaac aacgaactca gcgactttga aaagtgatca acgacttggt 180  
 caacggttct gaaaagaagt ttttcaaagc ttttgctaag tcaatggacn aanatgggga 240  
 gagttaaagt gaagactggc tcagctgggtg tgatcaggac acggtgttct gtcgctggaa 300  
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 <212> DNA  
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 agattcaaag gattccgatt cgatcttatt gtccgatctc ggtgtttctc gtttctctac 180  
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 tgggtttact actcgatctg atattggtcn tgctcgtgct gctccgggat cttcctgac 360  
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 <212> DNA  
 <213> Arabidopsis thaliana  
  
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 gccgtcgtca tctaatcga cgagcttgaa aagatccgtg ctctctctc cgccgctgtg 180  
 acagaggaaa tcagcctcgc tactcagctt aaccgtgctt catccgatca aaccaccgca 240  
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 aagttggagg atctggtgaa tttctctac tttgggtcac tcttcgacgt caagtcacag 360  
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 <211> 415  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> Clone ID: LIB22-047-Q1-E1-C11  
  
 <400> 4277

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 gattgtggac gtcaagttgt gagtttaac ggagatttat tccggcgatt acacggctct 180  
 aagttggtga agagcttgaa tctctgtagt atcaacgaga gtaaagattc gatttcaatg 240  
 gagatcaata aatcattcac tgacatggaa ggtgttcagc tttccagcaa agtcggttgc 300  
 gaagaatcca agaattttg gatactctga gctttatc ggaactaatg gtttcagcga 360  
 cgaactgac ctcggaagcg gcggtttcgg ccgcgtttac aaggcgtttg ttacc 415

<210> 4278  
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 <212> DNA  
 <213> Arabidopsis thaliana

<223> Clone ID: LIB22-047-Q1-E1-C5

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tcttgcttca gtcttccact tgtctgatta gttctccaag ttctatcatc aatccttcta 180  
aagtcaaaca ggtttcgctg aagcccaggg catttgtgta tgaaggtttt ttgacggact 240  
tggaatgtga tcatctaatac tctcttgoga aagagaatct gcagagatct gcggttgctg 300  
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<210> 4279

<211> 489

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-046-Q1-E1-H2

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cttaaggnta tcttgaang aantgggtgcn cagcctatan atgagtttat gtttctgcag 180  
nagtttgtcc atacgagata tgatttaact tcaaanacac ttgtcatggc tcaccgagtg 240  
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aatctctctc agtcatcact catcgagata tttgtgtcaa ggagatgcat aaacataact 360  
tgccaaaacg aactcccggc tgatggttgt ccctgtgaga tattcgctaa ttaggaaagg 420  
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anatggccc 489

<210> 4280

<211> 354

<212> DNA

<213> Arabidopsis thaliana

<223> Clone ID: LIB22-047-Q1-E1-C6







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 <212> DNA  
 <213> Arabidopsis thaliana  
  
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 <211> 419  
 <212> DNA  
 <213> Arabidopsis thaliana  
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 ttcgtttctca ttaacgccga tgagagtgcc agaatacgat cagtacaaga actgagtggg 180  
 caaacatgtc aaatctgtgg agatgaaatc gaattaacgg ttagcagtga gctcttttgtt 240  
 gcttgcaacg aatgcgcatt cccgggtttgt agaccatgct atgagtatga acgtagagaa 300  
 ggaaatcaag cttgtcctca gtgcaaaaact cgatacaaaa ggattaaagg tagtccacgg 360  
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 <212> DNA  
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 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180  
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 gccacatcca acacaagttg ttgctctact aaaagctcaa gaaatccgac atattcgatt 300  
 atacaacgct gatcccggtt tgttgattgc tctagcaaac actgggtatca aagttataat 360  
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 <212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-045-Q1-E1-G2

<400> 4291

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aatggaagaa ccagagactc tcggnaaaag aaaagaatct gaaagttcaa aacttcgttc 240
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acatgaagtt gctgttecta atgattacac accaagana gaagagacga ttcattgggac 360
gcttgataat cctgtcttca atggagacat ggccaagact tatcttttta agcttgaccc 420
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<210> 4292

<211> 485

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-045-Q1-E1-G3

<400> 4292

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gcggaaccgc gagatttccc accggagctc cgtcgtttta ggcttcagct cagacgctta 300
acgccgagcc agctgtaacg gaatccgttc gtcggagagt ttctagcctc tacgaattac 360
tgaaagtga tgaaacggcg tccttgacgg agatcaagac ggcgtacgga gcttagctaa 420
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<210> 4293



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 <211> 412  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-045-Q1-E1-G9

<400> 4295

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 tgacgatgct cgctcttctc catcacttct tcttagggag agaggtcgat tcaactcccag 180  
 ccgttacttt gttgaggaag ttatcactgg ttacgatgag actgatcttc atagatcctg 240  
 ggtaaggct gttgctacga ggagtcaca agagaggaac acgagggttag agaatatgtg 300  
 ttgggaggat ctggaatctt gctcgtcaaa agaagcagca tgaggaaaaa gaagcacaga 360  
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<210> 4296  
 <211> 480  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-045-Q1-E1-H1

<400> 4296

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 attctgcagg cgtttgctca aatgccagag ttaactgttt ggtatgggtcc tgattcttac 180  
 atgggagcga atattgtaaa gttattccag cagatgacat tgatgactaa tgaagaaatc 240  
 gccaatattc accctaaaca cagcttagat tccattaaat cattgcttcc ccgtcttcac 300  
 tatttccagg aaggaacctg cattgtacat catctattcg gtcacgaggt agtggagaga 360  
 ataaagtaca tgtactgtga cgcctttctt acagcacatc ttgaggttcc aaggtgaaat 420  
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<210> 4297



<211> 490  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-045-Q1-E1-F1

<400> 4297

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 ttttggttga ttcgattaag ctaaccatgt cttacaaacc aagcggaag actgaggttc 180  
 gccggaacag gtataaagta tctgtggacg ccgatgaagg tcgccggaga cgggaggata 240  
 acatggttga gatccggaag aacaagagag aggagaactt gcagaagaag cggcgtgaag 300  
 gttttaatcc ttccatggcg tcacagccag ggcaggattt ctctctgtct ctccctacgg 360  
 aaacgagatt ggagaatata caacaagatg attgctggag taatgtcaga ggatagaaga 420  
 cttacaattg gaggcgacgg ctagcttcan gagattgctt tcaattgagc gaaatcctcc 480  
 atcaatgaag 490

<210> 4298  
 <211> 445  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-045-Q1-E1-C5

<400> 4298

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 cttctcgatc cgcccctcta gcagacgcgc aaccgccttg acgacccgcg cctcctacac 180  
 cccgacgccg gcgactgagc gcgtgatttc gatagcgtcg tacgcgctgc cgttcttcaa 240  
 ttctctgcag tacggggcgtt tctgttctgc gcagtaccca aggctgggat tgctgttcga 300  
 gccaatcttc ccaatcctga acctgtacag atcgggtgcgt acgccaagct tcgtgggatt 360  
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 ganggttcaa cggcgaangc aaggc 445

<210> 4299  
 <211> 414  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-045-Q1-E1-C9  
 <400> 4299  
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 gtgataaagt gaaattcggg tatgataaag ataatatctt attacaagat gttacactta 180  
 atattgatat ggattcacgt gttggtgtgt tggggggccaa tgggggttgg aaatctacat 240  
 tacttcatct tttgattggg aagattcaac cattagaagg tacagtgata cgaaattcta 300  
 gtgcacggat tgcaactttt gcacaacatc atatggaaca attaaattta caacaatctg 360  
 cccttgatct cttcattgaa ctcttttcta aaaatcaacc tcaacttctg gcgt 414

<210> 4300  
 <211> 414  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-045-Q1-E1-D10  
 <400> 4300  
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 caccatcatc acctttctcc ttcacttgcc tcagatctgg ctgcgatttc aaatcttctc 180  
 tagtttctct cgcacgctc ggccgttgac ggtcccgctc tttccgtgga tctgattctg 240  
 gccccggatt ctctcgccgc gatctgaggt caaacatggc ggctgctaac gcgcccata 300  
 ttatgaagga ggtcctaacg cttccgagcg ttgggatcgg tcaacagttc atcaccttta 360  
 caaatgttac tatggagtcc gataagtaca taatgtgtac gagagacggc accg 414

<210> 4301  
 <211> 417  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> Clone ID: LIB22-045-Q1-E1-D11

<400> 4301

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cgtcggagcc ggaaaccgga gccc aaacct gacatatact ccactttcgt agtccactcc 180  
gactctgatt ctgatcaagg tcgagatcga gacaaacgta aagccaaacc tgaggaaaga 240  
cgaaaatgtc gatttatacg ctacaatggc ctacaaaggc gatagtgacg gagaaggaga 300  
ggaagatgat gatgacgatt ctatgcttcc tcctcttctc aagcgtcttc ccaaggattt 360  
cggaggcggg cgcgtcgctc gattacgacg acgacgaacg gtgatgaatc ctggaga 417

<210> 4302

<211> 410

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-045-Q1-E1-D12

<400> 4302

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caatggcttc tttggaaaat ccagcaatcg attcttcaag cgaatttgag agttcttctg 120  
aagagatctc ttcttctaaa gaaagcaaac ccaaagaagc tcccgtcact gttccgtaa 180  
caaaaacct aaactctcct tccgccgccc tggcagtttc tgatgactca gagtcagaga 240  
agcagtcatt cgtcttaacc aggcggaaga agaaagaagg tgctgctgaa tcaccggcag 300  
tgaagtcagg gaagaaagaa ggtgctgctg aatcaccggc agtgaagtca gggaataacg 360  
aaggtgctac tgaatcaccg gcggtgaagt caggggaaag aagccaanct 410

<210> 4303

<211> 491

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-045-Q1-E1-D4

<400> 4303

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 catctctcaa acctgccaaa aaccattcct ttaaagcatt gccggcgcaa tctcgagatt 180  
 ccttctcttt cccacatacc tccaaacca ccaatctacc gttgactctc tctcgggtc 240  
 gttctgtggc acgcgacatt tctcatgcgg attcgaagaa agagcttctt aaggatccgg 300  
 atgcgttggt gaagcgatac ctcgattggt tttatcaagc aagaaagagc ttgggttgta 360  
 tctgggatat taatcgggtc ggattttaccg atgagtttgt ggctgaaatg gagccaaggt 420  
 ttcaaagctg cgtttaaggc tatggaggat nttgaaaaag ggtctatagc gaatcctgat 480  
 gaaaggaaga a 491

<210> 4304  
 <211> 440  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-045-Q1-E1-D6  
 <400> 4304

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 nnnnnnnnnn nnnnnngata atgggagcct atgaaacaga aaaaccaact aaagatgcgg 180  
 cggctctaga gacacagtcg ccggaagatt tcgatcaacc atctccgctt cgtaaaatca 240  
 tctccgtcgc ttccatcgcc gccggtgtac agttcgggtg ggccttacag ctctctcttc 300  
 ttactccgta cgttcaactc ctcggaatcc ctcaaaatg gtcattctctc atttggtctc 360  
 gtgggtccagt ctccggcatg attgttcaac caatccgctg gtttcacagt gaccgatgta 420  
 ggtccaaatt tgggtcgccg 440

<210> 4305  
 <211> 420  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-045-Q1-E1-D8

<400> 4305

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 gttttgggctg agttcattat cgatctaggt cgtcactctg agacagtcga tgaattcgat 180  
 aagaatctta aggaagcagg tgcagagatg ccggattact tcgtccgggc gttgttaact 240  
 acaatccacg gtatttatcc tccgaagcct aagtcggaga agaagaaaga ggaagggtgat 300  
 gatcagaaat tcaaaggctt agcgattaag gatactaagg gataaagtta aggagctcga 360  
 gaaagagatt gagaagagaa actgaggagc gacgggagag aagaggatcg aaatanagat 420

<210> 4306

<211> 420

<212> DNA

<213> Arabidopsis thaliana

<223> Clone ID: LIB22-045-Q1-E1-E1

<400> 4306

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 gttagtgaag tatctgcaat tgatgtaggc ataacagctt caaacctttg gagctctggt 180  
 ttgacgcaac cccatgagtt tgcacaatcg tgcacacct cacagtggag ttctcctcag 240  
 caatgtcatc gtgatgcaaa tgaggatgct aagaaatctg actggctaaa taactcctac 300  
 tcctgtgtca aatgtagcaa aagactcaac actgaacgac caaatgggtt cccagtcgg 360  
 aagcagaaga agcctgagac aaccgctaa ttatagatta tttgggaatt gatctgatga 420

<210> 4307

<211> 493

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-045-Q1-E1-E4

<400> 4307

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cgataactcaa cttactagcg ttactctggt ccataccaat aacggcgtca ggtatatggc 180  
tagcttcaaa gccagacaac gagtgtgtca atctcctccg ttggcccgtt gtcgtcctcg 240  
gcgtttctcat cctcgtcgtc tccgccacag gcttcatcgg cgcctacaag tacaaggaaa 300  
ctctactggc ggtttacttg tgctgtatgg cgatattgat cggacttttg ctgggtggttc 360  
ttatatttgc attcgtcgtg acccgggccc gatggatcgt atcgggttcc gggtanaggt 420  
tataaagagt ataggcttga anggttctcg aattggctta aggagaacgt tgtggattcc 480  
aaagaactgg gga 493

<210> 4308  
<211> 479  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-045-Q1-E1-E5  
  
<400> 4308

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gaaataatth gctcttttagt tactgacgca tgtattcaag tctgccc aaa gaatccaacg 120  
aatttcaatg tggataatgt tcgtgtttcc aagcttttgg gaggaggctt gcacaattct 180  
tgcatagtcc gtggtatggt cttgaaaagt gatgctgttg gtagcattaa gcgaatggag 240  
aaagcgaagg ttgctgtatt tgctggtggc gttgatacca ctgcaacaga gaccaaagga 300  
actgtcctca ttcatagtgc tgagcagcta gagaactatg caaagacaga ggaagctaaa 360  
gttgaggagt tgattaaagc agttgcggaa tcaggagcca aagtcattgt taatggagga 420  
tcaattggag aaatgggcat tgcatttctg tgagcgctac aaagataatg gtattgaaa 479

<210> 4309  
<211> 437  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-045-Q1-E1-E7  
  
<400> 4309

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tctactttta ggctctctat tagcttcttc actctcatcc tcttctctct gtgggtagtg 180  
gaggcacaca cgtctagaaa gttgatatca atcaaggaaa aagaagggtca agatattagt 240  
catttgctca aagatgggtga atttgatgac ccttcgttgt acatgtattt cacactcaat 300  
gatctcaaac taggaaccaa attgctgatt tacttctaca aaaacgatct tcaaaagctt 360  
cctccacttc tcacaagaca acaaggccga tctcattcct ttcactaagt caaagcttga 420  
cttccttctc gaccact 437

<210> 4310  
<211> 439  
<212> DNA  
<213> Arabidopsis thaliana  
<223> Clone ID: LIB22-045-Q1-E1-E8  
<400> 4310

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agatcaaadc aggaaagact aagattatag gtgttaagag gactctagtg ttttatacag 180  
gtcgtgctcc taaagggaca cgaacttggt ggattatgca tgagtatcgt gctactgaga 240  
aggatcttga tggaacaaag tctggccaga atccgtttgt tgtttgtaag ttgtttaaga 300  
agcaagatat tgtgaacgga gctgctgaac cagaagagtc aaagtcattg gaagttgaac 360  
cagcggatc gtctccaact gttgtggacg aggttgaaat gtctgaggta tctcctgttt 420  
tccctaaaac agaagagac 439

<210> 4311  
<211> 405  
<212> DNA  
<213> Arabidopsis thaliana  
<223> Clone ID: LIB22-045-Q1-E1-E9  
<400> 4311

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agctcaagag attaggaaag gtgctgcttc tgttgatggt gttgaagcca tactctggca 180  
 ggtacccgaa acgctccaag aagatgtgct ctctaaaatg agtgcaccac caaagagtga 240  
 tgctcctatt atcaccccaa acgagctcgc tgaggctgat ggatttatct tcggcttccc 300  
 aacgaggttt ggtatgatgg ctgctcagtt caaggcattt ttagatgcca ccggcggcct 360  
 ttggaggact cagcaactcg ccggtaaaac cagccggaat cttctacagc acanggtccc 420  
 aagtggtggg tcaagaaacc accgcattaa ctgccantac tcaactgggt catcacngga 480  
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<210> 4314  
 <211> 454  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-044-Q1-E1-H7  
 <400> 4314

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 tgactctttt gaggcagttt gtgatagtga aaggagaaag cccttacaag ttttacactt 180  
 ggactgtgac ttatggcatt atctctcttc ttggtgttcc tcaacagggt attctcatca 240  
 atggtcagtt tcttgggtcca aaacttgaag ttgtgaccaa cgacaacatc atcctcaacc 300  
 tcatcaacaa acttgaccag cctttcctct tgacctggaa tgggattaag cagaggaaga 360  
 actcatggca agagggtgtt ttgggaacaa actgtccgat tgaaccanac tcaaacttca 420  
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<210> 4315  
 <211> 419  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-044-Q1-E1-H9  
 <400> 4315

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gctaagattg atcccatccc tccaggtagt ggaaggtggt gctagtccca ataagagaag 180  
aaaaacctct gaactggtac agagtgaatt agtgaagagt tggagccctg catcacagac 240  
cttatccact gccgtgtcaa catcaacaaa aactatagga tgcagctatg ggaatctcat 300  
agctgaagca aacaagggga atgcaccttc aagcggtttt gtttatgctc ctctccatgt 360  
ggtcaagcat tcttcgttgg tccataaagc atgccaaact aactagtcag atggaggna 419

<210> 4316  
<211> 414  
<212> DNA  
<213> Arabidopsis thaliana  
<223> Clone ID: LIB22-045-Q1-E1-A10  
<400> 4316

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ttggctcttg gcaactaggaa gatggctcag aagaatgctc tggtaggaa gctaccacgt 180  
gtggagactc ttggatgcac caccgtgata tgctctgaca aaactggaac tcttacaacc 240  
aatcagatgg ctgtttcaaa gctcgttgct atgggttcga ggatcggaac tcttcgatct 300  
ttcaatgttg aggggacctc gtttgatcct cgagatggaa agattgaaga ttggccaacg 360  
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<210> 4317  
<211> 489  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-045-Q1-E1-A3  
<400> 4317

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gtcnnattac ggcattcanc acctataaat ttcgccgctg gggttaattc tctattcatt 120  
cagaacccaa aaagaagaaa cctttttgat tctctttgct atttctttgt tcaatctctt 180

ctcagattgt gtgaatcggg tttaaatcgg ggttttaggg tctctgtttt caaaagggtg 240  
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 cgaggtttac gantgggtag gcaatcatca atggcgccgg agaagattcc ggagccgtcg 420  
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 taaaggtat 489

<210> 4318  
 <211> 370  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-045-Q1-E1-A5  
 <400> 4318

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 aactactttt ggcattgcag atttcagaga gctgtgattt gtgctatctt aaaaacggac 180  
 aagttctatg ttgtggcgga tgagatgagg gatgctatct gggttgatga attttctgaa 240  
 tgctgtctc tggccacggt cagatcagca ggctcgttct gcctcaagat tctggtggcc 300  
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 catgggcgtc 370

<210> 4319  
 <211> 441  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-045-Q1-E1-A8  
 <400> 4319

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 acgacgacgc cgcagtcaaa atcaagtgtg tcccaccgac cgccgttggg aagagaagac 180

tggtggagtg aggaagcgac ggcgacgctg gtagaagcct ggggcaatcg ttacgtcaag 240  
 ctgaaccacg gaaatctccg gcagaatgac tggaaagacg tcgccgacgc cgttaactct 300  
 agacacggtg ataacagccg taagaagacc gacttacagt gtaagaaccg ggctcgatact 360  
 ttgaagaaga agtacanaac angagaaagc taaactctcg ccgtcgactt ggcgttttcta 420  
 taaccgcctc gatgttctaa t 441

<210> 4320  
 <211> 426  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-045-Q1-E1-B2  
 <400> 4320

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 tctagtacca tgcttgttca ctatgacaaa gggactccag cagttgctaa tgagattaaa 180  
 gaagctctcg aaggaaatga tgttgaagct aaagttgatg ccatgaagaa ggcaattatg 240  
 cttttgctga atggtgaaac cattcctcag cttttcatta ccattataan atatgtgctg 300  
 ctttctgaag accacaccat ccaaaagctt ctgttgctgg tacctggagc tgattgaaaa 360  
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 cgnaat 426

<210> 4321  
 <211> 441  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-045-Q1-E1-B7  
 <400> 4321

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 aggatttggt taaaacgctg cgtattanca ctgtcggtag aaaacaagag aaggaggaag 180

aagaggagaa gtcggtgaag ttttaaggtga gagcagttgc gacggtgagg aacaanaaca 240  
aagaggatTT taaagaaact ttggttaagc atttggntgc ttttactgat aaaattggta 300  
naaacgttgt cttgngcctt atgagtaccc aaagttgatc caaatacgaa tgatccaaan 360  
aaagagtaaa gctgcaattt tgaaaagatt gggcaaagaa atcaaattca aaagggcgga 420  
aagagtccaa ttacacnggc c 441

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<400> 4322

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nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 240  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn ncaagnttct 300  
ctctagcttt tgctttcggt tccgctgaga gaagaggaaa atctctgagg ttaagtacag 360  
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atctgatcaa ntaggttat 439

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nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180

nnnnnnnnnn nnnnnnnnca ggatttggtt tttccgtttg aggtaaagca gctttgcagt 240  
 taaagaaacc ttgagtatcc aatgtccccg gaagaggagc tacagagcaa tgtatcgggtg 300  
 gctagttctt cacctactag caattgcac tccaggaaca ctctaggagg acttaaagaa 360  
 gcataactac ttgggtctct ctgattgttc ctccgttggg aaagctctaa tctctctccc 420  
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 <212> DNA  
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 gagatagata tctatagcat ctatacctca gtttgcatag gagattctgc gcgatcgtct 180  
 tactttgatt cagcgcaatt caaaacaaat tctcgcatta gctccaagag gatgccaccg 240  
 aggetcatgg gtggatatga tccatgctta gatgattacg cgagagtatt ttacaacaga 300  
 gcagatgttc agaagtctct tcatgcgagt gatggagtta atctcaagaa ctggagcatt 360  
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 <212> DNA  
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 tgctgaagaa gatgctttga agtgggaacac cgattgcgtt tactttctcg cttctccttt 180  
 aacctgcaag aagggacctg aatgcgagta tcgccacagt gagtatgcgc gtatgaaccc 240



gacgatctca aaatgatcat ttccaatccg cttcccgtcg tggctaactg ctcttgacag 360  
aaagctttta gaatcctctc ccaagacact taaaggtgac cgcgaaacgtt gtggtggcaa 420  
aaagacggna accgggaaag ttcaaaacag ttgaatgaag gaantggcgg gcaacaccgg 480  
ngaacagcaa 490

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<211> 491  
<212> DNA  
<213> Arabidopsis thaliana  
<223> Clone ID: LIB22-043-Q1-E1-H5  
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gcataccaat ggctgaaacc tggcactttt atttgggtga accccttact gtagtggaac 180  
tctacgatga tgggaagttg aaattcacat gtcttggtcc tgacttggtt gaaggtgatc 240  
agaagcctca gtacacgggc cctccaaacg tctgggttgg ttcgtttcct acaaaggatg 300  
ttcatttttc tcaagacggg gctctgctta aagctgaggc tagagactct gagaaccatt 360  
tctctcttgt tggctgcacc tgcgctcctg ctttccagtt cgaggacttt gagctcgca 420  
aacgctctga tctcttatca aggtttccgc aacacgaatc actcatcaca atgctatcct 480  
taaccggggg t 491

<210> 4329  
<211> 416  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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tagacatgac ggtatacacg attcgccgcg aggtagatcg gtgcttgata cgctctttc 180





agagccggat ttggaatgag acctggcttt cgtctttctt ttataagccc tgcaattatg 300  
 agttatattgt caaacaatct ctcaacatgg aaatggctat tgtcatggct agggatgcgg 360  
 gcatggattg ggatacttca tcttgacact gatgagctga tataccaaca aggtgctccg 420  
 tgagtactca ctaagaacngg ttgctgctt gatgttcccc caaatgtgga taanggtaaa 480  
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<210> 4332  
 <211> 455  
 <212> DNA  
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 <223> unsure at all n locations  
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 gaggtttcgtt tcttctcttc ctgcgatatc aattcgccgg tcacttttcg tatcgagaag 180  
 cttgatggaa acctccccgt caagaaatcg tctgattcgg gagttgtctc catcgagan 240  
 gagaaaaaac cagagcttta cattgagtgt gcattgtaca ttgatggagc tcccttttgg 300  
 ccttcccatg aagaacaaga ttgaaaacta cagggacca caatactggc tgggnaacga 360  
 actcatcaac tctcaagttg cnaaataacc ggggacnttg actggcccaa ntcaacaaac 420  
 ttggcgaatt acagttangg ggatgtttcc ttgtg 455

<210> 4333  
 <211> 504  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-044-Q1-E1-A3  
 <400> 4333

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 ctaaaacata aacgacattg atgtttcttc atcagatcct ttaattcttc tccaattctc 180

attctcctta catcaatgat aaactttgta gttggagatt tgttgtggat gaagattatt 240  
gattgcagct tataggaagc tgctcttttt gttttgaaca atgttgctaa cttttcagat 300  
tcttataatt aatcagtcct atgatgagaa gttgggttctt gattacatac tacaatcaag 360  
aagtaaacaa gttaagcaat cctgtgacgg gtctgtgtt caaaagagta gatacttggt 420  
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tatggcccga ataaacggaa tcaa 504

<210> 4334  
<211> 498  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 4334

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ttgctagagg aatcaaacia tgggtgttgt gaagtccacc aagtcgaatg cttacttcaa 120  
gaggtaccaa gtgaagttca ggagaagaag agatggaaag actgactaca gggcaaggat 180  
ccgtcttata aaccaagaca agaacaagta caatactcct aagtatcggt ttgtgtgccg 240  
gtttaccaac aaagacatag tggcacagat tgtatctgca agcattgctg gtgacattgt 300  
taaagcttct gcttacgcac atgaactgcc tcagtatggt ctactgttg gtcttacaaa 360  
ctatgctgca gcttactgta ctgggccttc ttttggtcc gcctgtttta aaagatgttg 420  
ggaatggatg acnaagtatg aagggaaacg ttgaaggcaa ctgggagaag actttcccgt 480  
ttgagccaac tgantcaa 498

<210> 4335  
<211> 489  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-044-Q1-E1-A6  
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aagtagttga gtatatgctt gatgtgggtt ctcacatgtg gagtatgcgg agaagcaaag 180  
caaacttttt caggattatg ggagttttga gtgggttaat cgcagtagga aaatggtttg 240  
aaciaaatctg caactggaag aatccaatca caacagtctt gatccatctc ttgttcatca 300  
tccttgtgct ctatcccgaa ctaatcttgc ccaccatctt cctctacctc ttcctcatcg 360  
gtatctggta ctaccgttgg agaccgaggc atcctcctca catggacaca cgtctctctc 420  
acgctgactc agcccccccc gacgagctag atgaagagtt cgacactttt cctacttccc 480  
gaccatcct 489

<210> 4336  
<211> 418  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-044-Q1-E1-A9  
<400> 4336

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caaggaagcc aaaggggtctc aaatttctctg gagcaggctg cggaaggatt agtcgacggt 180  
ggaaggagag agattttcac gccaatgtat ttcttcttgg cccggaagcc agagtaagcg 240  
gatgagagat ggcgatgggc atcgtaggtc gaatgaagtg acaaaatttc tcaatttgca 300  
gtcttatttt ctatgtttat cggatttggt gcanagtctc ctaatcacca actaatattt 360  
tgggatgttc gtaacatgtc accgtgttgt tcatgtgcac tcttgctga aatcctga 418

<210> 4337  
<211> 506  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-044-Q1-E1-B1  
<400> 4337

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 ataagatttt gatcaaaaga agacgagatt cgatccgac cgatctgatt gaagaagaaa 180  
 tggcgaatct gtatgtgaaa gcggttccac caccggatat gaataggaat acggaatggg 240  
 tcatgtatcc aggagtttgg acgacttaca tgcttattct cttcttcggg tggctcgttg 300  
 ttctctctgt ctctggttgt tcccctggaa tggcttggac tgttggttaat ctcgctcact 360  
 tcgttgtaac gtatcacagc ttccactggg atgaaaggaa ctccttttgc agatgaccaa 420  
 ngaatcctac natggggttaa acttggtggg aacaaaatgg gcaaattggg caacagcnta 480  
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<210> 4338  
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 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 ccttcaaaaa atctacaaca ggcagtcctc acaaacgaat tcacaaccaa cttcattacg 180  
 acctgtaagg actggctcga cgtaaattgg cttgctaaag gaaacttgga gaagaagaga 240  
 gatgataatg aagaagaaga gcgtctgaaa accgagtcta aacttcgggg ccatgacatc 300  
 cacggtttctg ataacgagat naagtcattg caacacttct tgttggatta agaagggttag 360  
 gagggagtgc aagagtcttg tgaatgtcgg gagaatatgg tgtttgggga agacagcatt 420  
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<210> 4339  
 <211> 451  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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tcacacaagc cttccgtctc tggacaaccc ttgtctagta cagagagaaa tcaggcagcc 180  
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gaatcgcgta ggctcatct tgtgatacga ccaccgacag aaagagaaca gcctcagaag 300  
aaacttgta taaaacgttc gaaagagatg aatgatcatg acatgagtag tcttgaagag 360  
agtccacggt ttgagtcccg gaaaacaaaa agaattggcag aactggcggg ttttcagang 420  
cagcagagct ttagattgtc agagaaatct c 451

<210> 4340  
<211> 491  
<212> DNA  
<213> Arabidopsis thaliana  
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gtaacggaat acaaaaagga tcaacttctc ctagtgttgg aagcattgga gaggatgcac 180  
gtcatctaa ctgcagctgt tgtttcaaac gatcccatct ttcttcagga agtaataggg 240  
aactcagtga atgggactac atatgctgga ctaagaggaa gaacaactgg agtcctcag 300  
aatcactggt ttggacctgc gggggacccg agaggggccc ggatagggac accaagaggc 360  
tataaagctg gtttggtcat gccacaagag aagtcatcta cgattatggt ccggttccac 420  
aagggtggga acttctctca tctacttaga agtggtgtgt ccactaataa ttaataaact 480  
aagatnctaa t 491

<210> 4341  
<211> 437  
<212> DNA  
<213> Arabidopsis thaliana  
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tggacacgcc accgacttct cgtatcgcat cttttgggtca gacggagatt aactgggaca 180

aacttgacaa aaggagggttc tacattaatg gagctggcct cttcactggg gttacagtag 240

ctctgtatcc tgtatccgtt gtgaaaacaa ggcttcaagt tgcttctaaa gagattgctg 300

agagaagtgc cttttctgta gttaaaggaa ttttaaagaa tgatgggtgtt cctgggtctgt 360

accgagggtt tggtactgtc attacagggtg ctgtacctgc aagaatcata attccaactg 420

ctccttgaag aacaacna 438

<210> 4344

<211> 423

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-043-Q1-E1-F7

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agatttgtga gtctcttgct acttcttcct ggagaacgat tcaggggttg atgtgataag 180

aatagtcatc gaggaagata gatttgggga tttttttttt atttgtagat tcatgaaaca 240

aattcgtcga tggcagagga ttttgatcct cgctctgcta tcgatattctg tattcgctcc 300

gcttattttc gtatcgaatc ggcttaagag catcactccc gttggtcgta gagaatttat 360

tgaagagtta tccanaatta gattcacgac aantgacctt agacttagcg ctattgaaca 420

tga 423

<210> 4345

<211> 419

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-043-Q1-E1-F9



<400> 4345

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nnnnagaaac agagagtttt tgattctctc tgttttcaaa tctgttccac taagctctct 180  
tgctttcggg aagattctgt ttcactgctg cattttggat ttttccgatg gatcgtaaga 240  
gttggccatg gaagaagaaa tcctctgaga aaacagctac tgtcacagaa gttgttgatc 300  
aggaaaatgg gaagaagccg agttatatcc aagatctcat ttgatcaata cacgaaatct 360  
aatgggttta aaagatgaag tcaaagagct acgaaagaaa aagttacaaa gccttgagg 419

<210> 4346

<211> 447

<212> DNA

<213> Arabidopsis thaliana

<223> Clone ID: LIB22-043-Q1-E1-G1

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agacgcatgt gaatcaagat gatctgtag tgaagtacca atacatctca gatgcgttga 180  
ttgctcttgc atacttctca atcccactcg agcttatcta tttcgtgcaa aagtctgctt 240  
tcttccctta caaatgggtg cttatgcagt ttggagcctt tatcattctc tgtggagcta 300  
cgcatttcat caacctatgg atgttcttca tgcattccaa agccgttgcc attgtcatga 360  
ctattgctaa agtctcttgc gcggttggtg cgtgtgctac cgcgttgatg ttgggtcata 420  
ataatcccga tctcccaagt ggtaag 447

<210> 4347

<211> 417

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-043-Q1-E1-G10

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 ctggtggaaa gggtaagaat ggtgacgatg gtttgacgcc ggagcaacgc cgtgaaagag 180  
 atgggaaagc attgcaagag aaagcggcta agaaagctgc tcaagctgca ggtgcgagtt 240  
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 tgtcttttga gcatattgta nactttaatg tttgaaattg ggttgtttag acctgaagct 360  
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<210> 4348  
 <211> 445  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-043-Q1-E1-G2  
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 attttcggga ttcattacag agagatggtg ttctgcagc atcagcagat gtgaaatttg 180  
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 accagcagaa acgtttgtct gttcgtgacc tcgctcataa atttgagaag ggtttggctg 360  
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<210> 4349  
 <211> 421  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-043-Q1-E1-G3  
 <400> 4349

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aagctggttg actcattgga caagcttcgt gttagtgtcg cgagttcatc ttctaatttc 180  
aagaagaagc ctatcattat tatcgttggt ggaatggcag gtagtggaag aactagcttt 240  
cttcacgcgt tggctctgtca tacttttgat tcaaagagcc atgggttatgt ggtgaacctt 300  
gacctgtcg ttatgtctct accatttggt gccaacatcg atataagaga cactgtcaag 360  
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a 421

<210> 4350  
<211> 420  
<212> DNA  
<213> Arabidopsis thaliana  
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<223> Clone ID: LIB22-043-Q1-E1-G4  
<400> 4350

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ttgagtccta atcatctctc tatctagcaa cgtataaata taaagagaga gagcagagaa 180  
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aagaagccaa agttcaaaag tgtgagccac ctcaaccatt accacaccat gccaatggct 300  
cgtccacttt ctttacagac gatagacctg aaagtaagga tgtgttgagc tggatgtgag 360  
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<212> DNA  
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acttttcgcag ctccgcctct cctccctggt atccgtgaaa atcttaacct caccgccacc 240  
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tggagcagtg gtgatatgtc cggagctgcc gcagtgagat tgtgggtcag ggagaagtct 360  
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tccaaacccg tggaatggac tacaacggtt acatgtactg ggtatcatta tgtgccttgt 300

tgggtttcac tgtgctcttc aacatcattt tcaactctggc tctaacgttc ttgaaatcac 360  
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gggttggtga ttcggagagt gttggtggtg atgggcttgc gatatctgag cttgggatat 420  
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aatgatgctc tcagctatct tgagaaacga agttgggttg ttcgatgagg atgaacacaa 360  
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agatgacagc aaacagctac ctactgagtg ggaaattgaa aaaggtgaan gaattgaatc 360  
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acccaccggg aacaccaccg ttacggaggt tatcaacagc cgtctaattc cttactggaa 420  
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 ccacaatctg aggccttctc tctgcagctt tcttgcgat aaagataccc catctcaaag 180  
 cagctttaag ctttagccat ccaacaacag ctttccccga gcctctatta cgttctcttc 240  
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 gtctgaccaa accctccttg tgttcccaca agtggtcaca ccgataccaa acgtcttcaa 360  
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 gtttgagtac gtgcaggaag acggcgaagt agtaacaact gaatatggga caacaaatca 240  
 gcaccctaaa gagtttgtaa ttcaataccc ggacgaacac atcatagcag tggaggggaag 300  
 ttaccaccaa gtggctctca ttgccacaga ngtgattacg tcctctgtct tcaagacctc 360

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acaattaccg cactgatgtc atccaagctc ttggaggtgt tgagggtatt cttgagcaca 180  
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gttttgagga ntcgatgaaa tataagaagt tgactaatgc tcagaggtct ggtctgaacc 300  
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cacttttagga n 431

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aaatgggaat ttcaaaacca ctccctctat tttcgatttt agtcctctat ttttcaactct 180  
acaccattac accaacttct tcattagcct cctccaaga tcaattcatc aactgtgtcc 240  
aaagaaacac acatgtttac ttcccacttg agaaaacggt ctttgctcct acaaaaaatg 300  
tctctatggt cagccaagtt cttgaatcga cggtcaaaa tctccgggtc ttgaaaaaat 360  
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 tacggttgct acaaggatttt cggaccgcgac ctaccgcgtt ggatacccgga cccgaagggtt 300  
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 <212> DNA  
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accacctaag aagcactacg aatacaaact tccacctcca ccggttaagc actactcacc  240
tctcctgggt taccattccc cccccacc aaagaaacac tacgtgtaca aatctcctcc  300
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<211> 432

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-041-Q1-E1-G4

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<210> 4374  
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<212> DNA  
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<210> 4375  
<211> 426  
<212> DNA  
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caccaccgac agggtcgaag aatagggttaa agaaaccaac caccttcac tgaagctca 360  
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<210> 4376  
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tcgatggaag agggagaaga atccgtatgc cgattatatg tgctgctcgt gtttttcagc 240  
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cagagccttc tattatagct gcaacaggaa ctggtacaac tccaagcgag tttctcaact 360  
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 gagtgatgat gaagctgttt accaggatga ccagtctgaa ttcgacactg gattcggtaa 240  
 cattatcgtg gtcgatcacc tccctgttgt tcccaaggag aagtttgaga aacttgaagg 300  
 tgttgtcaag aaaatttaca accagttagg tgtgattaag gaaaatggac tgtggatgcc 360  
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 tgagatcttt aggcgtttgt ctggaccaca agagaggagt gcttgcgctt ttgtctccaa 240  
 acagtggctt acgcttgtaa gtagcatccg tcaaaaggag attgatgttc cttccaagat 300  
 aactgaagat ggtgatgatt gtgaaggggtg tttgtctagg agcttagatg ggaagaangc 360  
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 aatgtc 426

<210> 4380  
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gccatcacca agcgtatgac tgccattgaa gagatggcag gaatggatgt cctgtgcagt 240  
gacaaaaccg ggacactaac cctcaacaaa ttgaagtgtg gncaaaaact tggtcgaggt 300  
tttctgcaag ggtgtggaga aagatcaagt ccgantatnt gcagctatgg cttccaggtt 360  
tgaagaanca gggatgccat tgatgcanc atggttgnga agctgctga 409

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<211> 473  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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atctccatgg atcgccgaag atacgtctca aatccagacg aagctcctcg aattcgcgaa 180  
gagtcgggag gtcttcgatt ggatgggtgaa aatcagaagg aaaatccacg agaatccgga 240  
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aatcaagtat aggtatcctg tagctatcac cgggtgtatc ggatatatcg gcaccggaga 360  
accgccattc gtcgccctga gagctgatat ggatgctttg cctattcagg aagggtgtga 420  
gtgggaagca caagagcaaa atcgctggga aaatgcaagg cttgcggnga tga 473

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<212> DNA  
<213> Arabidopsis thaliana

<223> Clone ID: LIB22-042-Q1-E1-A7

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gtctcctttc actctcgctt ttgatatcgc tggctctgca cctcgtgggt ttggcatccc 180

tgagttcatc tccaaaatct cgtatctctc tgtttttgcg gttgctacgc ttggaactta 240  
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 tgggtggcag gcattacggt gcactatgtg caaaggaaca gggagtgttc attaccaaatt 360  
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 agtt 424

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 <213> Arabidopsis thaliana  
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 gctctctcgc ttcgaaatct cttcaattcg attccgatct caccctcatt gatccgaang 180  
 agtattttga gattatttgg gcaagtttaa ngatcaatgg agagccagct tttgctgaaa 240  
 gatcgggtgat aaaccacaag aagtatttac aaaatgggtc tttgttgact tctccagcgg 300  
 ttaatatcac agacaccgat gttttgaccg cggatgggtc tgtccttggg tatgattatc 360  
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 aataccaaac agaacatgag gaagattaag t 451

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 ggcttcgtcg acaatgcgag aatgggtcag tatagacaat caggaacaga gaggtttttg 180

ggaggtcgaa gcggttacaa tccttatgtc aacggtggag cttcgtcaga tcacgtagcg 240  
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agtcgatggc ggcgatctac tcgattagat aggaatcgtc gttgtggtgt tggctctttg 360  
gtgtttgttc tttgtgttgt gctcgttgtt tgtgtctcag cttactatta tttctccggt 420  
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gaatgt 486

<210> 4385  
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atccgaatcc ggaccgaaa gcttgaatac ccgacgatta attgcacgat gtccgatgct 180  
cgtcgtctt ccccggtatc caccggtcgt cactggtgct atcactgcaa caaacgcgtc 240  
gtcgttgaaa ccttagatga ctttgcgtgt tgctgcgaat gtaacaaagg tttcgtcgag 300  
tcaattcaac cgactccgc cgcttattca tcgccggcgc caccgcagcc actttcccca 360  
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<210> 4386  
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tcttgtgtgt gctttcttct tgaagtacta tgcttatgtc gatggtggtg atggcgttgc 180  
 gatgaagaga actggtaagg ttcagagtga ggagaatccg aaggactggc catggccggtt 240  
 ccaagtttaa agtttgtgtc cttttgtttt gtggtgagaa ctgttgagtt aagatcaata 300  
 tcaaagtgtg gttttaaggt tctgtttcgg tggggtatta ttgtgatttg ttcatttggtt 360  
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 ctctgcatct tctggatttc tcaactatttc tccttctcta gaggaatagg cgagaaattg 240  
 agattaataa aaaggggtgt tttttgggtc tccttcgttt gtataaagcc tgccgcttct 300  
 taaggttctt tggaaattct caagtgatgg aggaaaatct ggtttacttc gcatgagcta 360  
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<210> 4388  
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 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-041-Q1-E1-D6  
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 tgggcaactg cggtactaga gacgaggctg ccgtcttcac tcctcaagct caagcccaac 180  
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tccgagacga ctctcgact cctatttcgt atgcccaagt catccccctt actttgtttg 300  
 agcttgagac catcaccaag agcttccgcc cagattatat actcggagaa ggtgggtttcg 360  
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 ttctgatga tgaaataaaa ggtgatggcc atgattcagt tgcagcacia aaggaagaaa 240  
 ctagctcaat agaggagaag agagagggtg aacatgtcaa ggcagagatg gaagatgcaa 300  
 tcaaacatga agtttccgta gaagagaaga acaacacatc tgaaaatatt gatcacgaag 360  
 ctgcaaaaga gatagagcaa gaggagggtg agcaaacaaa tattgtcaag gaagagatnc 420  
 gagaagaaga gaaagggatt atc 443

<210> 4390  
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 <212> DNA  
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 tgagtgataa attcaagaag atggattata aacttgcaat gagtgttttg aaccctaaga 240  
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acggagttct ttcaccttat gatatggaga gattcagagc atacactgcc aatctcgttg 360  
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 cctcaaggat ttcaaagatt cggaatcatg agcgtgagag acttcgtggt cctccatggt 180  
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ccggtctaata tgcagcagtt tttatcttca aaatgatgga atggtggtat caatccgctg 300  
aagagagatt atcagctcca acagtgtacc ctccacctcc acctcctcca agccccaag 360  
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aaacatattg ggttnagttt cctaattcac ttaattgaac taatgagatt ccntgatttg 360  
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gccagagctg tgcccatcac gtatcttgaa tctgcagtgg cttaaaggagc tgtgtgtttg 180  
gatggtagcg cgccagcata ccatttcgat aagggatcgg gctcaggagt gaacaattgg 240



atcgttcata tggaaggagg aggatggtgc actgatatag ctacatgcgt tcaacgtaaa 300  
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 ggtggcaagc aaagcaccaa tccagacttt tacaattgga atagaatcaa agttcggtat 420  
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 ttaccaccaa cttgtcatca agagccattc cattcaagtc cagattctga tttgatttcc 420  
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caag 424

<210> 4397  
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<212> DNA  
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gctgagatta agtggtgacg tatatgatga agttggcata ggaggtggtg cttctggtgt 240  
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gtgttgagga gaatgttttag aagctcttaa atgtggctga aacagctgct tcttctagtt 360  
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<223> unsure at all n locations  
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 cgctaagaga actttgagag agattaagct tcttaagcat atggatcatg acaatgtcat 360  
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 acaagtagcg atgggttcgg tgaatgcact tgtgaagaaa gctcttgatg ttggtgtgaa 180  
 ccatatgatc attggaaaat aataccgaaa ataacgttta ggctaattgg cgatcatttc 240  
 atcagtgggt tgctcggggc gagtttgatg caatttttct atttgcttgg tctgtcctac 300

acgtcagcaa ctgttgcggtg tgctttggta agcttgatgc ctgcaatcac ctttgctttc 360  
gctcttattt tgagaactga gangataaca agatctaaaa gaccaagca ngaatgataa 420  
a 421

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<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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<400> 4403

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atcgctggga aaaatctgat ggaagcagct tcaagttttt tgtgtagaag tattcggatt 180  
ccgtcgacta ctacggcgac ggcggcggtc acgttcactc gaccgccgtt aaactacgtt 240  
tgtgttgtcg gagttcgtgt tttcccgacg cggaaggtct tttgcagcgg cgттаатggc 300  
ggctccagtg ttactaagaa gaagccacga aggaaaagta acgtttccga taaacttang 360  
tttaagaaaa ttgagaagag gaacgataat actgaatctg agagtттаag tgttgt 416

<210> 4404  
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<212> DNA  
<213> Arabidopsis thaliana  
  
<223> Clone ID: LIB22-041-Q1-E1-B8  
  
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ttcacaacat ccaacaatcc tgatgtctgg attcctgcat acaagtcttc tcgctgggtct 180  
tcggtgttct tcgtgctcta cgtgctaatt ggcgtctact ttgtcacaaa cttgattctt 240  
gccgttgttt atgacagttt caaagaacag ctcgcaaacg aagtatctgg gaatggatca 300  
aatgaagaga agaatggttg agaaagcctt tgggtcttat agactcagac aaaaacgggg 360  
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 <212> DNA  
 <213> Arabidopsis thaliana  
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 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 360  
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 tgggaaa 427

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 <211> 489  
 <212> DNA  
 <213> Arabidopsis thaliana  
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 tcttagtttt tctcctcaat tgccgatttc tctctttctt ttcgagcaga aatcgtaga 240  
 tcctttatcg ctgtgtaata gtagtactaa ttttaataat cttgagagta attactccgt 300  
 tcattgttga atcatggagt ccggaggcaa aactaatcgt cagctgcgta aagctatttg 360  
 cgtctcaaca gacgagaaga tgaagaagaa gagatcacct tcagtgatag tgattgggag 420  
 gtggtatggc tgggaatttc aagccgctcg cactcttcaa gatgcttccc ttcaagggtg 480

489

cgttatccgc	cggnaccggt	ccaaaatccc	gggtcgaccc	acgcgtccgn	tctctcaatc	60
caacaaagaa	aaaaaaagtc	ttctttctttt	tttacaagtc	tgagaatttt	ctacagaaac	120
aaaaatctga	ttgtttttcc	cacttttgcac	ctgtttttgag	gatgccagct	acggattttc	180
aaggatcatt	tggaaggtcg	ttgctaagtt	tacggcgaga	ccaagttgac	tcatcaacag	240
tcgctctcgg	aagtagtagc	caccacgagc	caagcaccat	ggaggttgag	ctagattcgt	300
ttcaaagaca	agtcgctgag	aaattcatcg	atctcaacgc	ttctttcaaac	gaccttctct	360
ctctcgaatg	gatcggaag	cttcttgatt	ctttcctctg	ttgtcaagaa	gagtttcgag	420
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a						481

cacaacaaat	caaaaactcc	aagttctttac	cttttttccca	tttacaaatcg	gtaaaatttct	60
ccgatcacga	gatacaaatt	tcacttttctg	atatcttgga	tcttccgatc	acnnnnnnnnn	120
nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnn	nnnnnnnnnag	180
agaagaaacc	atgaatgctt	tagctgcaac	aaacagaaac	ttccgtcatg	catctcgaat	240
cctggggttg	gattcgaaga	tcgagagaag	tcttatgata	ccatttagag	aatcaaggt	300
tgagtgtacg	attcctaaag	acgatggcac	tctgggtttca	tacatcggat	ttaggggttca	360

acatgacaat gtcctgtgga cccatgaaag gtggaatcag atatcctcct ganggttgat 420

tca 423

<210> 4409

<211> 461

<212> DNA

<213> Arabidopsis thaliana

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<400> 4409

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taaaaatcaa gaaagcacia ggagacaaat aaacctatcc atttcattac caaacaagcc 180

gtacannnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 240

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnc tctcttcaac tagacttatt actcggatca 300

gctattcatt ttaaaaacca aacttcattc aagacccaac agggagattc aagaagctta 360

gaagagtgga agcatatctc agcaaaatca acaaaccttc catcaaaaca atccacaagc 420

ccaagacggg agatgtaata gaatgtgtac cgtctcattt a 461

<210> 4410

<211> 420

<212> DNA

<213> Arabidopsis thaliana

<223> Clone ID: LIB22-041-Q1-E1-C5

<400> 4410

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ctgagaaaaa aattgaggaa aatgttttac aagggttcaga aactgaaaaa tcaggtagag 180

aaaagttaca cagtggttct actgggtccag ttgtaatcat aaggggggttg acatctgtga 240

aaggccttga ggggtgttgaa ttacttgaca cgcttggtac atatctatgg cgtgttcatg 300

gtctggacta ttacggaaag gttgaaacaa atgaagctaa aggggtttgcg gcatgtgaga 360



gctgaaggaa aagtttctga tgcaaaagga gatgagaatg aaagtaaatt cgactctcat 420

<210> 4411  
<211> 411  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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agatcctcgt gagcctcgtt cattattatc atcttcttgt ttcccaatca ccctcaagtt 180  
cgttgatgtg tgttaccgag tcaagatcca tggcatgagt aacgattctt gtaatatcaa 240  
gaaactatta ggattaaaac aaaaaccgtc cgatgagaca agatcgacgg aggagaggac 300  
gataactaagc ggagtcaccg gaatgatatc acccggcgag tttatggccg ttcttgggac 360  
catcggaagc tggcaaatcc tacgctacta aacgcagtcg canggagact c 411

<210> 4412  
<211> 418  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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aaatcgatcc aagatgcaac gaagttgcta tgttacataa tactgttaca ttggttgcta 180  
gggctcgtgc tcgtggcaat gatctttata aatcagaaaag atacactgaa gcaagttcag 240  
cttatgctga aggccttagg cttgatcctt gcaacgctat tctatatattgt aatcgaacag 300  
cttggttggtt taaacttgga atgtgggaac gctcgattga agattgtaac caagcgctgc 360  
gttatcaacc aagttacaca aagccacttc ttcgganggc tgccctcaa at agcaagat 418

<210> 4413

<211> 484  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-041-Q1-E1-C9  
  
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 tgattttacc tccttagttg ctgtgagatc aagaagtggg gaaagaaaag ttactaaatc 180  
 tggatgttat ttgattgtcg tcgttgggtc tgagctatga ggagcgtaa taatagtagt 240  
 gtcgacaccg tgaacgccgc cgcttcgcc atcgtctccg ctgagtctag aacacaaccg 300  
 tcgtcgggtc aagaaaaaaa ggggaagctg gtggagcttg tactggtgtt ttggatncaa 360  
 gaagaacaat aaaaggatag gccacgcggg gcttgtacc gaaccagctg catcaggagc 420  
 tgcggtggct ccagtccaaa actcttcgan gcaattctac ttcaataatc aaggcccttt 480  
 aaaa 484

<210> 4414  
 <211> 294  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
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 ctgtggcatg ctaagccaga gaagtatgat atgtttcaca tgattcttca ttcaatttgg 180  
 tataaccgag ttttccaaat ttctgtttaa aaattttgtt caacaattca atgtacattt 240  
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<210> 4415  
 <211> 484  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-041-Q1-E1-B12

<400> 4415

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catggatgat tggcgtccag gcaacatata tagacgacaa tcgcctttgc tgcagcagca  180
caagacaaga aaaagtgtgt tccatggcat gatcactgca tagatgatcc tcttgtccca  240
gagcaaagac ggcggtttct catcgcatte atggcgctcc gatactcttt tggggcagat  300
tcttggaccg gatactgaac ttatcattag ttttgtaga atgggagtat gattaggcca  360
ttcattacag tttatgatta gaggcattgc tatcccttga gctttggagt aagaaaatgg  420
ggaaatggta tagatgtgaa tgaagtataa ttttctctt ggnatcatat caccatcaat  480
tgtc                                                                    484

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<210> 4416  
 <211> 415  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4416

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agttcaagaa aatgggtctt agagtcattg ctgagagctt atctgaagaa gaaatcgccg  180
gcttgaaaga aatgtttaat atgatagatg cggacaagag tggtcagata actttcgaag  240
aactgaaagc aggactaaaa cgagtagggg cgaatctcaa agagtctgaa attctcgact  300
tgatgcaagc tgctgatgtg gacaacagcg gaacaataga ttacaaagag ttcatagctg  360
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<210> 4417  
 <211> 413  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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 gaagacaaat atatcttttc tattcctcag atctctgaaa tcgaagtctc tcgaactggt 180  
 ttgttttggt ttttttccga tgaggtgtaa gagacacaca gtagatttca gtagcagtat 240  
 cggcgtttgt gcttcttggt tccgtgaacg actctttact ctgcgcgttt caaccgcccgc 300  
 gtctgaaaac gacgataacg atcatcgta tctctgtatt tctccacctc ctctgctttt 360  
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<210> 4418  
 <211> 487  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-039-Q1-E1-H4

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 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnagcaa taacggtggt tcgaacccat 180  
 ctgcaggaga agaatttaag gatatgatta agggagtgc taagttcttg atgatgggtga 240  
 ttttccttgg aaccatcatg ctttgatca tgatgccaac actaacctat cgaaccaagt 300  
 gggtgccaca tctgcgtatc aagtttgga catccactta ttttggtgcc acagggacga 360  
 cgcttttcat gtatatgttc ccaatgatgg tcgtagcttg tttgggatgt gtctatcttc 420  
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 ggagtta 487

<210> 4419  
 <211> 456  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> Clone ID: LIB22-039-Q1-E1-H5

<400> 4419

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gtaacaccag actcccaccg gaggtgaatc gcgtgctcta cgTtcgtaac cttcccttta 180  
acataacgag cgaagagatg tacgatatct tcggcaagta cggcgcaatt cgccagattc 240  
gaatcggttg cgacaaggcg acgaaaggta ctgccttcgt cgTttacgag gatatctacg 300  
atgccaaaga cgccgtcgac catctctctg gcttcaacgt cgcgaaatcg tacctaactg 360  
tgTtatacta ccaagcacgc gaagatgaag caagaagTtt gaccagaaga agagtgaaga 420  
tgagatcacc aagTtgcaag gagaagtatg ggagtc 456

<210> 4420

<211> 439

<212> DNA

<213> Arabidopsis thaliana

<223> Clone ID: LIB22-039-Q1-E1-H6

<400> 4420

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gatccaagct acgccgcac ttactcgccg gcggcttgaa tcatggctga taggagaaac 180  
aggTgtaacc agatcctcct tttagcatac cagagTtttg gcttagtgTt tggagatttg 240  
agtattttct ctctctatgt gtataaatgt acattctacg gaggattgag acatcaccaa 300  
acagaagata cgatatttgg cgcgttttct ttgatatttt ggaccatcac tctcctttca 360  
ctcatcaagt acatggTttt tgtgtTaaag tgcaagatga caatggTgaa aggagggatc 420  
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<210> 4421

<211> 483

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-039-Q1-E1-H8

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 tgggtcacca atcatcagag caatgagttc cacatcagag gccgacgctg agagtgttct 180  
 tagaaccgtg acgccatcgc tcgatctcaa acgacacaaa ggccaagctg ggaagatagc 240  
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 tgaaaatcgg tgctgatttg tctcatgtat tctgcacgaa aagatgcagc tctgtttata 360  
 aagaagctat agtcttgagc ntatagttca ccctgggttct tgaggaatca tatancatca 420  
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 aaa 483

<210> 4422

<211> 433

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-040-Q1-E1-A1

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 tcgctccgcc gccagatcgc accagccgtc ggatggaata agcaaagtcg tatttgagg 180  
 acaagttaca gatgaagaag ttgagagctt gaanaagagg aagccttggt caaattacaa 240  
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 gttagcaagt gctaattccg ccacanacgg caaatcaaga actttccagc aaccaccaag 360  
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 cgacggtgcc ana 433

<210> 4423

<211> 419

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-040-Q1-E1-A10

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atggntgctt tctgatacct tctctcacga caacgatttg ctcgcaagag ctctccatac 180  
cacgcgcaca gnccctcata ctctcactcc ttctctgctt ttcttcgatt cctccgctgt 240  
ttctcaccct tcttccacta nacacactct cctctagcgt ctccggtgct tctgatccaa 300  
gaaatcatcn gcggaggagc taaacggaaa cgtaanngcc ttcttaccga cngtaaagcn 360  
gccaaagcgn gcgctcgtgc ttccaagaaa tctcagacta ctttcataac ggcngattc 419

<210> 4424

<211> 433

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-040-Q1-E1-A3

<400> 4424

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aacagatctc cggtttcctt ggtaccancg gcaatgttct caacaccatc gacgttcact 180  
attctcccat acctactgga ggaactggca ccggaggaac nggcaccggn actggnaccg 240  
gaactggcac tggaactggn actggcaccg gaactggcac tggaantggc actggaactg 300  
gnaccggagg aactggcact ggaactggca ccggtactgg gaggaactgg cactggaact 360  
gngcaacgga ngaactggca ctggncaccg gcaactggga ctggcaatgg gaaccggga 420  
ctgggantgg gca 433

<210> 4425

<211> 501

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-040-Q1-E1-A5

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gctctaaacc tccacacctt caccgcgcgc cctcatgtag ccggtacagt ggccaacgct 180  
gaagcagcgg aatatgttcg ctctgttttc acctcctctg ctctcaaata acacgtcgtt 240  
gcttaccaag tgtctctaac ttaccaggtt catcgctctt tggactaac gccgacagac 300  
tctgcaaagc caatcacttt cttgctggaa caagaaaaac tcggagacaa tccttatgct 360  
aatgaagtga tgectacttt tcatggatac gctaagtcag gtaacgtttc aggtccagtg 420  
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<210> 4426  
<211> 439  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-040-Q1-E1-A9

<400> 4426  
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tcaataactca acagtcaagt tgcaagggcg tttagtantt ctactgctgt tgangangca 120  
tcaatatctc acattccagt gctctcaggg tttantgtcc ccaaattagt tctacaagtg 180  
gtgtctgttg attcantttt ccggataaca agtccaagct ttaatgagct tgtcattctc 240  
aaggatactg ctttttctgt anacaataaa gctatganaa tttcacnagg aatgcctaata 300  
gatgcatttt tctcatcatc gttaccangc agattgtctt cagcgtngac accantgaac 360  
tctatttcaa ggaacctgga aaaaactgcg gtgggntccn cgaaatgnca aggttctacn 420  
catccaaaga agatgggtg 439

<210> 4427  
<211> 479  
<212> DNA  
<213> Arabidopsis thaliana



<223> unsure at all n locations  
<223> Clone ID: LIB22-040-Q1-E1-B1

<400> 4427

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cgtattaaac ttgnccatt ctctctagcg ctttttgctt atggcaaagc taatggttta 120  
cttacaatga anganttcaa acgaagccgg ctctcaang tatgttgga atnacaatgn 180  
tccagacaaa tgttnatana aaattccgtt tcatgttggt ttgactccaa tcaagatggg 240  
gaaattnagt gtggatgact ttttgccggg tctgcatcca aagaaanaag gaccttgcaa 300  
aagncaattt gcaaaaagga ttggccccgg tactcctcaa taatggatgg ggaaagggtc 360  
caaagaaact ggttctctcaa ccgggggaaaa actcctcctt cctcctttgg ggggcntaac 420  
cgatgaaact ccgaagacta ttttttgaag gtccttggtt tcaaacgaat tgagcccaa 479

<210> 4428

<211> 488

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-040-Q1-E1-B4

<400> 4428

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gcggtcaatc ggatttcttg ggattgtttg gagaaacttt ggaggatgatg gacaacanna 180  
atgatcagga tattgatgtt agatcagtgg ttgaagctgt ttccgccgat ctttcctttg 240  
gtgctnccct ctatgtgggt tgaagaacat gtgcatgcgc tgccaacaaa atggaacaan 300  
cagattccta ttgaccttaa atccccaaact caagnaaagg cntaataacc tgcaattgga 360  
tntccgcaat tnnngggaaa ggaataatga aattcaattc ccnaggcaaa atcnaaccen 420  
ttgaanncgg tannanccaa aagggtccaac ctgggaagtn aaaataattg acccgcaaat 480  
tntgaaaa 488

<210> 4429

<211> 449

<212> DNA

CCDS#43666.1

<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-040-Q1-E1-B5

<400> 4429  
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atgttatctg nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 120  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 180  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 240  
nnnnnnnnng tgaancagcg attcaagctc gganaagang angagcagca nnaangttaa 300  
gttgggcntt gaggatgttg aagttgataa ccctaatacg gtttctaact ttcggatttc 360  
tncgcctttg agggataagc ttaaggcnaa ntggattga agctcgtttc cncgangcaa 420  
gcttccangt tcggatatgg gtccccgaa 449

<210> 4430  
<211> 415  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-039-Q1-E1-H10

<400> 4430  
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cgagagaagc agaagaagaa aatggcggag actgtacatt ctccgatcgt tacttacgca 120  
tcgatgttat cgcttctcgc cttctgtcca cctttcgtca ttctcctatg gtacacaatg 180  
gttcatcagg atggttctgt tactcagacc tttggcttct tttgggagaa tggagttcaa 240  
ggacttatca acatatggcc aagaccact ttgattgctt ggaaaattat attttgctat 300  
ggagcatttg aagctattct tcagctgctt ctgcctggta aaagagttga gggccaata 360  
tctccaaccg gaaaccgacc agtttacaaa gggcaatggc ccgggntgct taatt 415

<210> 4431  
<211> 499  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-039-Q1-E1-F4

<400> 4431

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ctctttctca aaatcttggt tattttttta ataaaacaaa gaaattaaaa agatgatggg 120  
tacattagta ctaaagtacg tcctcgtgat agtcatgacc ttgatattaa gagtcctata 180  
cgactccatt tgttgctact tcctcacacc aagacgaatc aagaagttaa tggaacgtca 240  
aggcatcacg gggcctaaac cccgtctcct caccggaaac atcattgata tctccaaaat 300  
gctctctcac tccgcttcta acgactgctc ttccatccac cacaacatcg tcccacgcct 360  
tcttctcat tacgtctctt ggtccaaaca atatgggaag agatttataa tgtggaacgg 420  
gacaagaacc gagactatgc ctaacgggag accgagatga ttaaagaant ggctaacgaa 480  
gcacaatccg ggtcacccg 499

<210> 4432  
<211> 499  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-039-Q1-E1-F5

<400> 4432

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gatctaagag gaattgatcc aacatgggta acacagataa gctgatgaat cagatattcg 120  
atttgaaatt tacgtcaaag tctctgcaaa ggcaatcaag gaagtgtgag aaggaagaga 180  
aagcagagaa attgaagggtg aagaaggcta tcgagaaggg taatatggat ggtgctcgga 240  
tctacgctga gaacgccatt cgtaagcgta gcgagcagat gaactatctc cgtctcgctt 300  
ctcgccctga cgctgttggt gctcgtentg atactcangc taagatgacc accatcacca 360  
aatccatgac caatatcgtc aaatcccttg agtcntctct tgccacaagg aatctacaga 420  
agatgtcaga gacaatggnt tcaatcnaga aacaatttgt gaacatngag gtccaanctg 480  
agttcaaggg gnaaaggca 499

<210> 4433



<210> 4435  
 <211> 393  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-039-Q1-E1-G10

<400> 4435  
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 aaggacctaa agataagcca attaggtgtg gtgaaacaga ggctaaagca taagaaagta 120  
 cttatcgttc ttgatgatgt ggataatcta gagctattaa agacttttagt gggacaaacc 180  
 ggggtggtttg gacctggaag cagaattatc gtgaccactc aagataggat ccttctcaag 240  
 tctcacaaga ttgatcatat ttatgaggtg gggtagccat cgagaaaatt ggctcttcgg 300  
 attttatgtc gatctgcttt cgacagaaac tccccacctg atggtttcat gcaacttgca 360  
 aatgaagtta canagcttgt tggtaatcct cct 393

<210> 4436  
 <211> 414  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-039-Q1-E1-G12

<400> 4436  
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 gacctgagtt ccagctatta actatgcaga taccatcaag agagcatagt ttcattctat 120  
 ttctcttcat atctgctttt gtaattggtg ctgctgtgt acctgtacct gattctaatt 180  
 gctacgctct cgacaattca agtcgtcttg tcgatttttag cagctggatc ggtcatccat 240  
 ttgaatatga tggcaaggaa tttgatttgg tggtagatt ttgcaaggat gtggaaacaa 300  
 gagggcaggg gggatatgtt gattttggga cgatttgacc cgttaagcta ctttgtttct 360  
 agttctgaaa atttcgattt cgtgcaaggg ttttaccatg ggcgaactgt caaa 414

<210> 4437  
 <211> 485  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-039-Q1-E1-G2

<400> 4437

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gaaaaggatt gacatttgac agcgggtggct acaacattaa aaccgggcct ggctgcttaa 120  
ttgagctcat gaaattcgat atgggaggtt cagctgctgt tcttggcgct gcaaaagcca 180  
ttggtcaa at taagcctcca ggtgttgagg tgcactttat tgcgcagct tgtgagaata 240  
tgataagtgg tactggaatg agacctggag atgtcctcac agcctcaaac ggaaagacga 300  
ttgagggtcaa caacaccgat gctgaagggtc gactaacact tgcagatgct ttagtttatg 360  
cttgcaacca ggggtgctgat aagggttgttg accttgcaac attgactggg gcttgattata 420  
atgtccttgg gnacatcaat ggcaagcata tatacaccta atgataaacc ttgcaaaagg 480  
angtg 485

<210> 4438  
<211> 501  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-039-Q1-E1-G3

<400> 4438

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ggccgaacgg gaatgagcaa cgacgaaatg acaagatgag gtgctccggg cccccccatt 180  
tanatttaga aagaagggtc gaagggtttg ggctctagc tttccccgct ccccttgagt 240  
tgggtggtgc ttgtgtgggg ggcgtgccac cagaaatcgg gcttgaagct ctgccttac 300  
caangagccg acagctgatg gctatggctg ttgggtcacga ctactaccaa aagggttccaa 360  
tgaagatgaa tatttcacat ggaagagtgt gcatctgtat gttgggtgtt ctctgtcgtg 420  
cgacccggcg gcttatgttc nacctgtggc ccangcctcc taattgttca aggcggcngc 480  
ttnaactccg aatccattcg g 501



[illegible]

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<211>      491
<212>      DNA
<213>      Arabidopsis thaliana

<223>      unsure at all n locations
<223>      Clone ID: LIB22-039-Q1-E1-G8

<400>      4442
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2156



<210> 4443  
 <211> 391  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-039-Q1-E1-H1

<400> 4443

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 aactgcaa at agagtgaagt ggaggggctt taaggtaatt acggctgctg ctgaagctca 180  
 aaaatatacg gctggtcagt ttattgggtg tggaggctgg ttatcgtcga ccggtttccc 240  
 cttctcgtc ggtctttgag agattgttgt gtaatgtgtt cctacgtatt gttggctaca 300  
 aaaattattg attaatattg tatgaagcaa atcgtgttgt cctctttgtt ttgtttgggt 360  
 tgtgtacttt ctctaaaaaa aaaaaaaaaa g 391

<210> 4444  
 <211> 505  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-039-Q1-E1-F3

<400> 4444

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 ttttgagttc ggattaaatc tgcgtcgcga tttgggtccaa tatctcctag catcgagaga 120  
 tttctattct ggctaaattt tgtgttttct cagggtggata agaaattttc tctttgtcgt 180  
 tttctcgtat aattttcgga ttacggcgac gaatcagatt gttttttgggt ttcaaatttt 240  
 ctgatatttc caaaaaaaca aaaaaatctg atttttgaga aaaaagcaat gcaacggatc 300  
 gtggacaacg ctctcgtgt aaccaaagaa tcagtaaaaa ctgttacata tgagtctttg 360  
 aataacattg cgagggtgat aaatgggagt atcagctctt ctgttgacct ttctcccaag 420  
 gaaggcta at attcttgaan ggcttacatg gctggggaac tcaagcctac gtttcgtggg 480  
 accacgttta acaacgggtg ggtnc 505



gtggtgaagt tatgtatgat naacgtccgt ttaaccaaga caaagggatt ggctccnggt 480  
 ttcccc 486

<210> 4447  
 <211> 500  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-039-Q1-E1-C7  
 <400> 4447

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 tgctatggat cgtcaagccg gagagggaga atgatgaact accatctccg gcgataattt 120  
 ccgaccgant tctggtaa at ggtgttgtca ccccgtaac gttgaccgcc gagggaaagc 180  
 tacnatchnac ggaatctgga cggcggaat cnacnttggc aaaagaaatc ctgantttcg 240  
 tcgtggaagg taacaagggt agagtaaaga ccttggttga gaaaggagga ggaatttgct 300  
 gtaaaggaan tgctggnat tatncaagga acgatttcgt tttcgagcct ctctctgatg 360  
 aatctagaaa gctttggtcc gataagttcc atcaacacct cgtctctctc ggtcgggcaa 420  
 agaaattgct gtgtttgtga aaccgtttgg cggggaanaa aacancgaga angatatttc 480  
 aagagggaag taaancccat 500

<210> 4448  
 <211> 453  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-039-Q1-E1-C9  
 <400> 4448

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 nnnnnnnnnn nngctttgga tccttcgttt ctctcgtttt cgacctctct ccaaagaagt 180  
 agctttctctc aagattttcg gtttggtgca gcttcgagtg cttatcagag tgaaggagca 240  
 gccaacgttg atggaagaga accaagcata tgggatacgt ttactaaaca atatccagaa 300

aagatttcag atggtagcaa tggcgacggt gcagacgaat tttattaccg tttcaaggag 360  
gacgtggcac atatgaaaga aatagggctg gactcattta ggttttcgat ttcttggtcc 420  
anaatactac ctccgangtac ggttgctgga gga 453

<210> 4449  
<211> 414  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> Clone ID: LIB22-039-Q1-E1-D11  
  
<400> 4449

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atctccgccg cgtgtttctc tctttttgtc tcctttcttc ttctccctaa tcttaatctc 120  
agaaaccaac aacatcagta gtcagtaccc ccacacacac agagagaccc tttttcgatt 180  
ctccactttc tcataaagga acgatttttc gagatgtggg tcagtgttga tttctctcct 240  
cttggttat gagtttcgaa ttccgaatctc aaactaaaaa gctttttgaa acaagcaaca 300  
aatgttactg acacctaaaga tgtttaagtt cttggcttcg acaagatgtg aagaagatcc 360  
tcaaacgcaa agacagtgat gctggtgaac gaagaaaaag cattgggagg actt 414

<210> 4450  
<211> 498  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-039-Q1-E1-D3  
  
<400> 4450

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ctttctcata acaacaaaaa aacaaaaaaa aaacctaat agttttttct ttctgcagag 120  
attatggagg taccggtgat taatagaata agagatttcg aagttggtat aaactcgatt 180  
aatgatcctt cgtttctttc tcgatctgtt gctgtttccg gaatcggaaa gctacaccaa 240  
gcttatgggt tttggaaatg gggagctttg attatcgcat ttctagctta tttcaccaac 300  
tttgtagta aactcaacag tctagttgtt aggttaagaa aaatagatgt ctctgtttcc 360



agcatatcaa aacggtcttg attgctctgt tttagccaaa aacagactct tgtagcttg 300  
 tgatccatca gctgttcata tagctatgac tctagatcca gcttacttgc gtggcacggt 360  
 atctgcagta cattccatcc tcaaacacac ttcttgccct gaaaacatct tcttccactt 420  
 cattgcttcg ggggtacaagt cagggttccc tcgccaagaa cctancctcn gtttttcctt 480  
 ccttgagttt caaagtcca 499

<210> 4453  
 <211> 416  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-039-Q1-E1-E12  
 <400> 4453

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 agaaaggaat ctgaatcgga gaagcaatcg aggtttacga ttaccaaatt ctgatctaatt 180  
 ctgattaatt gtggtgattt ccgatggaag aagacggtgg tggcggcggg gcgaaagttg 240  
 gaatgctgga gaatttcatg aagacgcac agagtctttt gaaatcgta ttccagagaa 300  
 agaaatcatc ctctggctgt gatggagatg cttctccgtc gcctatcgct tccccgaaac 360  
 ctattccgca gctctctctt tctcgccaat tccgtcgtct ccccgctgt tcaaaa 416

<210> 4454  
 <211> 500  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-039-Q1-E1-E3  
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 tatacaaacc tttctcaatt cttcttgaca ttagggtttc ctctttcttt gagagggcta 120  
 aaaccctaatt atatccctct cattgactaa agagttaagc ctactctatc tactttggaa 180  
 gcgaaattca aagggttaagg naaaagccct tgaaagagga agaaagatac aagatcctca 240  
 aagaacctaa agatctaaag gntgtaagaa gaaaaacaaa tggngtcgtc atcaaactca 300



cggggtaagg tacttacaaa tactgcaagg tcattatgag ttagccatca tgaagattca 300  
gatacctaag tttattgttt tgcttataac ttaatgcggt tgggggctaa atcttttttg 360  
aggattcaag ttagtggttg atgacntgca tanaacaagg atatatccat g 411

<210> 4457  
<211> 500  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-039-Q1-E1-F2  
<400> 4457

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caccaacaaa acaaaaaaaaaa ggttttgatc aaagagatca ctgttaaacc ctcacaaaat 120  
ttctcagga ctaataatct gcgatcgatc gtcgttatga taagtctcta aagaagattg 180  
atgattctgg attacattat catgggagga gcttggtcaa ggaagagaga tcaacaagtt 240  
gaggatattt taaacagagg tgtctctgga aaatatagca agagttcaag ttcgaaatgg 300  
ttagctactt cgctctctag gtctggctcc gatgttaaac ggaagaatgg agaatgcccg 360  
tcgcttatgg gagctctgtg tccgcaagat acaggaggac attgataaga tataccaagt 420  
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gttaccttta aagtcccctg 500

<210> 4458  
<211> 416  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 4458

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gtttcaaatg aagttccaaa gcaaccctg gttgatgacg atgagaatga tgaaaaaat 120  
tctgaaaaat atgggtctgc ttctggcttc tccatcaata agaaacggaa aaatgtagtg 180  
ggtactacta agaagagtaa gaagaaaaaa ggtaacaata atgctggcga ttcactctgac 240



cctgactctg gtactctagc aaaagttggg tggttcagag ttgtactaga tgaagctcaa 300  
acaattaaga atcatagaac ccaggtggca agagcatggt gcggtcttcg aagccaaaag 360  
gangtggtgt ttgtctggaa caccaatata aaatacaata gaatgattta tacaag 416

<210> 4459  
<211> 495  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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<400> 4459

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taaaatgggg ttcaacggca gagacacaat taactccggt gcaagtcacc gacgacgaan 180  
ctgccctctt cgccatgcaa ctagccagtg cttccgttct tccgatggct ttaaaatccg 240  
ccttagagct tgaccttctt gagattatgg ccaagaatgg ttctcccatg tctcctaccg 300  
agatcgcttc taaacttccg accaaaaatc ctgaagctcc ggtcatgctc gaccgtatcc 360  
tccgtcttct tacgtentan tccgtcttaa cctgctccan ccgtaaactt tccgggtgatg 420  
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tgggtgttcc antgg 495

<210> 4460  
<211> 445  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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<400> 4460

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aatgggtcca agcttatttc cttgtgcttg atgatattat ggataactct gtcactcgcc 180  
gtgggtcaacc ttgctgggtc agagttcctc aggttggtat gggtgccatc aatgatggga 240

ttctacttcg caatcacatc cacaggatcc tcaaaaagca tttccgtgat aagccttact 300  
atgttgacct tgttgatttg tttaatgagg ttgagttgca aacagcttgt ggccagatga 360  
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acngtcntat tgtccagtac aaaaa 445

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tccgcctcga agcaaggact tttccccaag ttgctggagt tgttgtttcc ctcgtagcaa 180  
gaagaagaat attcctgaag aaaaccgagc tctgcgtatg agtgattatg atgacgaaga 240  
gatgaatctc tctctagtc cgaagaagtt cggtaactca acattcctca ttgattcaat 300  
tcccgttgct gagttccaag gccggcctct cgcggttca cctgcgggta aaaacggggc 360  
gtccaccggg tgcactcacc attcctcgag aacttcttga tgcactgact gtagcagaag 420  
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tgaggagctg canaaacaag tgattgttga gaaaatcggg gaaccggggtc aaacccatga 240  
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 tgtcaattct ganggtgtcc caaggagcan gatttttttc gtggcatggg ctccggacac 360  
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 ct 422

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 <212> DNA  
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 gctcagggtca aagctgagag ctccaggagcg agtacgaagt atgacgcaa agatatagga 240  
 agtcttgagg gcaaggcttc gtctgtgtct gtaagaccaa gccctcgaac tgagggtgag 300  
 atcttacagt ctccaaatct caagagtttt agctttgctg agcttaaate agcaaccaag 360  
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 <211> 421  
 <212> DNA  
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<223> unsure at all n locations  
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 caggactttt gtgttgccgt cgatgacgct agtgggtgtt tcgtgaatgg aaaattctgc 180

aaagacccaa aatacgtnaa agctgaagac ttttttactt cgggactaaa catcgccgga 240  
 aacacaataa accgcgttgg ctccaacggt acaaacgtta acgttgacaa aatccctgga 300  
 ctcaacaccc tcggagtgtc tcttggtcga attgactttg ccccgaggagg tcaaaacccg 360  
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 g 421

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 ttgggttaca aattcttctt tacatctaaa aagcagcgtt actatctccc tccctctcca 180  
 tcttactctc tccaatcct cggccaccac ctctcatca aaccgcgggt tcaacgtctc 240  
 ttccaccgcc tttccaatat ccatggccca atcttctacc tccgaattgg tccccgcgg 300  
 tgccgtcgtc atatcttctt cctcgtctgg caagagaatg cttcacagggt caaaacgatg 360  
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 <212> DNA  
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tttggataaa atcataatct cctcttcaat tttcttgtga aatggaagtt tcagtgattg 180  
gaaatcctca agcgaggatc tgcagagcag aattagctta cagagagctt ggatttagat 240  
ttggctctga tgtaatctcc ggtgaatcga gaaatagggg tagtttctgc aaccaaagct 300  
ctaaatggaa agagatcgcg atacgttgct cttcgagatc tgtcaaagt gaagccatcc 360  
gtctccgatg acgcttctcc gtttctcaaa tccaactcca aaatctaaat cgctcgagaa 420  
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<210> 4467  
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<223> unsure at all n locations  
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atcagtccaa gacagcgatc gagcttacgt gacgtttctt gctggaaacg gtgattacgt 180  
gaaaggagtc gttgggttag ccaaaggggt aaggaaagtc aaatcggctt atccactcgt 240  
agtancgatg ttacccgacg tcncggagga acaccgtcgt atacttgtgg atcaaggatg 300  
catcgtccgt gaaatcgaan ccccgtttac ccaccccgag aaccaaactc agttcgccat 360  
gggcttanna cgtnatcnac nnacgncgaa cnccgatatc ggaagttttg tggaagtan 419

<210> 4468  
<211> 469  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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acttcttcc attcaaccct gtggataaga gaactgcttt gacttacatc gactctgatg 180

gtaactggca cagagtcagc aaaggtgctc ccgagcagat ccttgacctt gccaatgcc 240  
 ggcttgacct taggaagaag gtactctctt gtattgacaa gtacgctgag cgcggtctta 300  
 ggtcgttggc agtagctcgt caggtgggtac ccgangaaaa caaaagaaag cccaggtgga 360  
 ccatgggaat ttgttggtt gtttgacctt ttttgacctt ccaagacacg acagtgccnn 420  
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 ggcgacgcct ttgagtatca gcgacctaat ttctcttcta accacgattc ttctgcttat 240  
 gacgaccaag ctcttaaaac cgagtacagt agctatgcac gacccggacc cgttggatct 300  
 ggatctgatt ttggccggga aacctaatc tggatatgga gggagaacgg aggttgagta 360  
 tggccggaaa actgaatcgg ngcatggatt tgggctaag ggtgggaang aatt 414

<210> 4470  
 <211> 460  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-037-Q1-E1-F3  
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 gctttggtac nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnt agttcgaacc 180  
 cttttggatt tgggtgtacaa agtggtgggt ccagcagacc gaatcagttc cagaatactt 240



ggagaggtgc tactgagttg tatgagcaag cagcaaattg gtttagagca tcaaacaat 300  
atgagaaaagc taaagtggct ctcgagaaaag cttcaaaagg acaagagatg caagcttctc 360  
cttgggatgc tgcaaagcat atggagtctg ctgctgcctt agcacagaag ctaagtattt 420  
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<210> 4473  
<211> 361  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-036-Q1-E1-E7  
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attccaatgg aagaagaaag aaaagacacc taccactcag aagagagaat ctcaggtttc 180  
ggttatgaac ggtgagaatt cttttggggg cagcгааata tgtgtcagaa taaacagctt 240  
gcanaaaatc cgcagtgagc ttgatgttgt ggaaaaaaga gtgatcacac atttgaggaa 300  
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c 361

<210> 4474  
<211> 324  
<212> DNA  
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<223> unsure at all n locations  
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attcgttctt cttccccgga gacgacaagc atcgaagaat ctgttttagag acagctatgc 180  
ttgtctctgt ttctgcgttt tctctttccg atcttgtctc tcgngatccg gtgaagaagc 240



tgccgccgat cacatcttcc agtttccaag agattctaaa ncttttgtct tttgatcctt 300  
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<210> 4475  
<211> 402  
<212> DNA  
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<223> unsure at all n locations  
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tatgtactca accaaggaga atatctgcta tgtctgtttc ggagagggtt gcttacgaga 180  
gaggagagca gttgggtgaa tctgttggat ataaagttcg attggaaggt gttaaaggaa 240  
gagatacccg cttactcttc tgcaccacag gcattttgtt gagacgcttg ttggtagata 300  
gaaatttaag aggagttact catgttatcg nggatgaaat tcangagcgt gggatgaatg 360  
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<210> 4476  
<211> 401  
<212> DNA  
<213> Arabidopsis thaliana  
  
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cgggtcaaga agttttctct ggttcaacct gcaaacaagg agaaatcgag gcgggttggtta 180  
ttgccactgg ggttcatacc ttcttcggtta aagctgctca ccttgtggac agcactaanc 240  
aagttggaca tttccagaag gttcttacag ccattgggaa cttctgtatc tgttccattg 300  
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<210> 4477  
 <211> 476  
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 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 tcccggcggg tttgtgctcg agcttaggca taggaggaca cataacaggc ggtgcgtacg 180  
 gttccatgat gcggaaatat ggtctagggtg cagacaatgt tctagacgca aagattgttg 240  
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 gaggaggcgc tggangggag ttttgggata attctaacat ggaagatcaa gcttgttcct 360  
 gttcctaaga ccgtgaccgt ctttaccgtc accaaanacg ttacaacaag acntgggtaa 420  
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 ctctggattt caatcgactc gaggttttgt cattactagg tegtggagct aaaggagttg 180  
 tgtttcttgt ccgcgacgac gacgctaaat tgcttgcttt aaaagttata cttaaggaag 240  
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 ttcgaagcaa ggagtattaa gcagattcga ccatcctctc tttccgtctc ttcacgggtg 360  
 tttagctacc gataaagtca tcggttatgc gatcgattat tgtccgggac agaattctcaa 420  
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482

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<213> Arabidopsis thaliana  
  
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tggcgataag ttctctgggt ctttgagaaa aaaacccctg gttgggtcac atttgcctcc 180  
tagtactcct tcaacaacag ctcttcacc tctcttgggt ctctctgagg tttctcacat 240  
tggnatgggt cattgggttca ctctccgtga ccttcaactc gcgactaatc atttctccaa 300  
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<212> DNA  
<213> Arabidopsis thaliana  
  
<223> Clone ID: LIB22-036-Q1-E1-G8  
  
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ggcattcacc ggttccttat ctctttgggt gtttagcagc gatgcttgggt ctcatagctt 180  
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aaaaccagag cagagagaga gatcttgaag tcggagatgt gaaacctgac aaaacggcgg 300  
tgaagcctgt agctttgccg gagaagttct tgggtgattat ggccggaaat gtcaaacct 360  
cttacttagc aacgccgtcg gtaaaaacgt gtacttgtga cgatgatgac gatgaaga 418

<210> 4481  
<211> 421

<212> DNA  
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 <223> Clone ID: LIB22-036-Q1-E1-G9  
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 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnngagtctc cttcgcgatc 180  
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 a 421

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 <223> unsure at all n locations  
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 aaggtgtcac cgtccacgac ggcgaatggg actcccatgg agccctcaag atttggaact 180  
 acacattaga tgggaaaccg gagatgttca gggagaggag ananatagac gatgatnaac 240  
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 accattttac agttcattca aaagtcnccg gatnatatcg tttgcaagat cactatnacc 360  
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 <211> 415

<212> DNA  
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 <223> unsure at all n locations  
 <223> Clone ID: LIB22-036-Q1-E1-H2  
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 acggtggaaa agtgaaaaaac tggatcactt tcaacgagcc atgggtcttc gctcatgcag 360  
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<210> 4484  
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 <212> DNA  
 <213> Arabidopsis thaliana  
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 ggattttctt tgtcnagcaa gagccatgtc actganaccc aacgctaaga cggagggttcg 180  
 ccggaacnga tacaangttg cagtggatgc ggaggaagga cgacggagga gagaagacaa 240  
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 <211> 473  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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gtcaagcaat tgcttaaatt ggggtgcagag aaccctgatt cacatcgttc cttgggttaa 240
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gagggtccta gaggtgagc gcccatcaat cagtcaattg cagaataaat cactaatgga 360
aagcaaacia agagttcttg ggaagacacg aagattcatt ggtgcacaga gctgcatatg 420
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<211> 494

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-037-Q1-E1-A5

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cctgcattgg agaaagatcg gtacaaantc cgtcaggcct tcatancatc acctggaaat 420
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<210> 4487

<211> 421

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gatccggggt	tgattccggg	tcagatccgt	ttatctggcc	gcaaatcgaa	atcagcaccg	180
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cgggtgtctgt	caccgatcat	ttttgatttt	ttaaaaatct	cccgatgatc	caaatggtta	360
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<400> 4488

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gagcagttag	cttctgttga	tggtttatgc	gagtgggtgt	tgaaggctat	aggcgcacgc	180
gatccgggtc	atacttaca	tatcaatcta	tcagttttca	cttcgattcc	tgatctctgg	240
gggattgac	agctgttccc	tatagttcct	atccataagc	tcgatcaaag	gcccggggct	300
cgcggaatcc	tttcagattt	aacgtgtgat	agtgcggga	agatcaacaa	gttcataggc	360
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2179

<223> unsure at all n locations  
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<400> 4489

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ggtttgcagt gtcttggatt cttgatcaat tccccaaatg gtatcctaan agaacgtgaa 300  
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acctgttgat gtttttgtta agtacagtgg atccgttgaa agagccaccc ttgattacag 420  
caaacacagt tcttttcatt cctaacagtt tgattatcct gtggataagg ntgcgtgtta 480  
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<211> 415  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4490

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ttccctggca tgtattcttc ggactctata cctatgggtt aaccantgcc acagctgaga 180  
ccggactgcn tgagaaactg angttccttc agaccaagag gaatgtcccc agacgcgggt 240  
ctgaatcaat gactgtcaat ggtttagggc ttggcttggc tctacncggg ttgcattggt 300  
ataactgctg ctattttgcc aaagtatcan gngccattct cntgatnaga aactcgttta 360  
attcaatcgc aangatngtc cnaaaatggt ggtccgccct ggagggtttta gnttt 415

<210> 4491  
<211> 467  
<212> DNA  
<213> Arabidopsis thaliana



<223> unsure at all n locations  
 <223> Clone ID: LIB22-035-Q1-E1-H12

<400> 4491

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 aaatagtttc aggcaagagt tcttgatcgg agaaggaggg tttgggaggg tttacaaagg 180  
 aaagatggag aagacaggac aggtaaaaat aaagtggtag ctgtgaagca acttgaccgt 240  
 aatggattac aagggaaatag agagtttctg gtagagatct tcaggttaag tcttcttcat 300  
 catcccaacc ttgccaatct cattggatat tgccttgatg gagaccagag acttcttggt 360  
 cacgagttca tgctctttgg ttcccttgaa gatnatcccc ctaaatgttg tantaggaca 420  
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<210> 4492  
 <211> 453  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-035-Q1-E1-H3

<400> 4492

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 tatgaatgaa actgtggtgt aagagaatat naatggttgt tanctgctan aatgtttttt 180  
 ggaccaagtg agtttgatgc tgatgaaatg ggttatgcaa tgagtagact tgagatagaa 240  
 tccnatctat gtgatactgg aaaagacggt tgtggagttg gtantactan tggtantcac 300  
 angatcaagt gaacatttgg ctgatctaga ccattganat cagccacggt actaaattga 360  
 aatcctagtc ctcatcaacg gtaaaaccct naaagtcgcc tggggaagga gccngnccca 420  
 anccatagcn gacaagtcct crigactgata cag 453

<210> 4493  
 <211> 426  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-035-Q1-E1-H5

<400> 4493

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gtgcagtttc ccgtctcagc cagaanactg tccgttttca tataagccta ntggtaacca 180
agaaggacca agtctatgtg attgtaatcg aaaatgagaa natgactgtg caagagtttc 240
ccgangaatt ctaccgtgtc ggacctgtta cgcatagcag gacccagggg agctcgagat 300
ggtcaatgta cagcatcccg ggcaaaggaa gacctaaaggc caangactta accnagacac 360
ctgtaagntg atctgaaatg caagctnaaa gatggggaga tgtggtggag cctgatccaa 420
tcctntg 426
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<210> 4494  
 <211> 446  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-035-Q1-E1-H8

<400> 4494

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cctggccaca ntatatgcat tgntcggatg tccactctct tatgtacnat ggtacaggcc 120
actctaccga gccatgagga ctgacagtgc tttgaanttt gggttggtttt tcttcaccta 180
cttgattcac attggcttcg gcacgtgtgc tgccatcncc cctccaatct ttttccatgg 240
aaaatcatta angtaagtct tccaataata gcccnacgtt tctacttgcg tttgagtgtg 300
ctcttacttc anatgtagtt gggttaagtct ggtgagggct tcaattgggn aagttcctaa 360
aattggtctg anacggttna ttaanaattc antttgttac aaaattaatg acgattaagg 420
acctacaagt tggaagtggag aatcct 446
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<210> 4495  
 <211> 442  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-036-Q1-E1-A7

<400> 4495

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agagctttca gttattgtct ctgctttgca acacgtgatc tcaggggaaa acgaaacggc 180  
gccgtgtcag gggtttttcca gtgacagcac agtgataagc gcgggaatgc ctcggttgga 240  
ttcagacact tgtcaagtct gtangatcga aggatgtctc ggctgtaact actttttcgc 300  
gccaaatcag agaattgaaa agaatcatca acantgaang aagagattac tagtaagtag 360  
taacagaaga nagagangag ctctcccgtg ggcnaagaaa ngcnggaggt ggcngggaaa 420  
atcaggaaga ggaaanaaac aa 442

<210> 4496  
<211> 408  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-036-Q1-E1-B3

<400> 4496

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ccatttcena acagaatttt tcctcttttt ctctttctct ttttcattcc ttagagattc 180  
ntgattctcc cacttccttc tttagtcgtt acagtcnttg ctctgttttc aaaaaaanaa 240  
agttgggtcc tttctcaact tttttcccgg gaaaagtga tgagagctaa aannggttta 300  
tcatgtttga gattcccggg gtaatacaaa ttctctctca nnaaaaaggt tccantttta 360  
aancctcttt cgaaantctg gtanntttat ggagtaagnt tagggggt 408

<210> 4497  
<211> 412  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-036-Q1-E1-B6

<400> 4497

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tatcagatct cgccgatctg ttgtagcagc tactgtatct tgggcttctc atttgatatt 180  
ggggaaacga ggagtagagg acgatggaaa atctgatctc tctggttaac aagatacaga 240  
gagcttgcac ggcttttagga gaccatggag actccagcgc ttacctact ctttgggatt 300  
ccttgctgc gatcgccgtc gttggtggtc agagctcang gaagtcttca gtctggaga 360  
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<210> 4498

<211> 417

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-036-Q1-E1-B9

<400> 4498

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acagaagtca acaaattctt catttgtttt ttagcaaatc aaagaaatgg ccggaggggt 180  
cgtcagtcaa acgcccgggtg ttcggaacta caattacaaa ctgacaccga aagtgtttgt 240  
gacatgtttc atcgggtgctt ttggtggtct catcttcgga tacgatctcg ggatctcagg 300  
aggggtaacc tcaatgggag ccattcttgg gaaagagttc ttcccttacg tctacaagaa 360  
gatgaagagc gcacatgaga acnagtact gtcgatttga tagtcagctt ctactc 417

<210> 4499

<211> 419

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-036-Q1-E1-C6

<400> 4499

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tcttctctccg tcgccggcga aaccatgtct cagtctatct aattctccac tccttcacac 120  
actcttcacc ttctccatct cctcactca caattcaacc gtctctctc ctctatctcc 180  
ttccgtcgct tccctetaac aaccatcaaa tacacttcca tcagagcctc ctcgatcatca 240  
tctccttcac cggatctcga ttcategtcc tcatcancat cctcgcaagt acttctctca 300  
nctaacggta ctgggtgctgt gaagtctgat gagagatccg ttgtcgctac gngcgggttan 360  
gacngatacg tctgggattg aggttgatac tgtgncggaa gctgaagctt aaggaagaa 419

<210> 4500  
<211> 415  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-036-Q1-E1-C8  
<400> 4500

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aagctggatt cgtctctggt gctgtagatt ttcgaagatc cggtcagagt cgttcgtgaa 180  
aagtccttg ttttaagtgtt acgggctaca tcggacgctg actggctttt catggaattt 240  
gagtgccaaag agagacttga agctgcgaac gatcaaagaa gtgagtctgg tcttttgaat 300  
accgatttga gaataggtaa tgatgggtct gttgagattc caaaatgtga agttgtgttg 360  
tcagaaaaag aagggaaact tagtgcccag tggcntcgaa acagttacnc ccctg 415

<210> 4501  
<211> 422  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-036-Q1-E1-D12  
<400> 4501

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ggagctcttg gactatgaag aagaagacga gaaggtccca gattctggaa acaaagttaa 180  
 cggcgaagct gtgaaaaaag ggtacgtggg aatacacagt tctggattca gagacttcct 240  
 tttgaaaccg gagcttctca gagctattgt tgactcagga tttgaacatc catctgaagt 300  
 gcaacacgaa tgtatccctc aagctatctt gggatatggat gttatctgcc aagcaaagtc 360  
 tggatatgggg aagactgctg tgtttggcct gtcnancctc acaacagatt tggaccaatc 420  
 cn 422

<210> 4502  
 <211> 421  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-036-Q1-E1-D7

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 tccttctttg tggcttaatc aaagagtttt aagtcgacgg cgaagcggag atagttctct 240  
 cagatggagg ttcgttggtg gatctacaat ggggaactat gactctcgac gacggcanca 300  
 gatctgggtg gatttcttcg tcagtctctt cgcggaggta cctctcctcc gatgaacctc 360  
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 g 421

<210> 4503  
 <211> 449  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-035-Q1-E1-G3

<400> 4503  
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ggagcttgct tacctggaac tgggtgctaaa attgtagctt tgggttgagg tccatgtaca 180  
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ctagataaag atgctgctcc ttattataaa aaagctgtaa agttttatng atagtattgc 300  
aaagcagctt gtcgctcagg gtcattgtgtt agaccttttc gcttctgcac ttgatcangt 360  
cggggttgct gaaatgaaaa gtaancgttg aaagtacccg gtgggtccccg tgatccgtcc 420  
gaaantttgg gcaatccgta attaaagat 449

<210> 4504  
<211> 451  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-034-Q1-E2-E9

<400> 4504  
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ccgtcatcnt gattcacgtc caaccacaaa acgccgatca taccgcgaaa atcctcttcg 180  
aggaaaccgg ttcaccgcta attcctttgg aggaatttan agagggtta at ttgtctaaac 240  
agtatggact tgcttacgat cctgagggtc ttgatgttct tgatactcnc nctatggcna 300  
aaaagggtgaa ggttgtagca aangtgtatt ggggagattc aatggagaaa ctttgtgatg 360  
ctgtcnaaaa tctaaaacnc gattccattg ttcntggnac tctaaggtn ggggttcctc 420  
aaaaggatct tgcgggggta ctgtgncaat c 451

<210> 4505  
<211> 451  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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tgaggggaata tttgcagatc gatctatcgt cgatttagat ctggcggttcc tanggttcat 180  
cgacgctgga gattcatggg ctctggtgat tgcattttcg aatttttgct gaaattgggg 240  
aaaatttttag gtgctgtgta tatggatana ngtggganga gatctggtga atctccaggg 300  
gtattgatta acaanagaag ttcttctggt tgcttaattg tgaagaagaa cnatggtgtt 360  
ggtacgactt gttcgtttca gaaaatcgnc cgaattggga gtccaataag aagtcaagat 420  
nattacaatn acccgaatcc aacgataaaa t 451

<210> 4506  
<211> 443  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 4506  
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agtatttgga aaagataatt tgttcttgaa ggaagtgttc atccacaagt acctccaaaa 180  
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caaagcaacc cgcgaccata ttaggtccat tgctagccag gggagcttca atgttcgtaa 300  
agaagttgaa aacttggttag taacgtacat gacaccaaag ctgataagtt ancctaaanc 360  
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<210> 4507  
<211> 399  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-034-Q1-E2-F3

<400> 4507  
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caagtgtagc ttgcctatca ccaacgggtcc aggattcgcc agaatcaact gtttatcatc 180  
 agaanacaca gagtcaggta aatcttcttc aacnaattca ctttgagtgc ttagattatn 240  
 atccttaaag aattcagtat gtgtgtanac atgtatgtac ctgaatgtct cttttctgga 300  
 gagacttgta taagtcttcn aatgcgtgaa taacacttgt atcnatgtcc gtncagtgaa 360  
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<210> 4508  
 <211> 451  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-034-Q1-E2-F4  
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 gtcacgattc attgttgctt ctctcaaaag gtattttctg ggttttagctt cttanagggtt 180  
 cttcgttctt aaaggctctgt ttttttttag gttgtgatac tttgaatgta aaaaanggaa 240  
 gatttttagt ttgatattgt atatctctcg gatggggttg agtcggagtt tcccgccgct 300  
 ttttggggga tttcgggaaa ttctanggtt aagggttgga taatgtcttc ctctagcagt 360  
 ctctgcnact tttaaaatcc cctcaacctt ctttgaaaat taaaaaagggt tttttaantg 420  
 gttggttcct ccctgggaat ccaaaattct g 451

<210> 4509  
 <211> 498  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-034-Q1-E2-F9  
 <400> 4509

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 cgggtggacat ggctaatacca naggagctta agaaagtttt cgaccagttt gactccaacg 180

gcgacggcaa gatctcagtc ctcgaactcn gcggtgtgtt taaggctatg gngacttcnt 240  
acacagagan ggaactcaac cgcgtgctcg aagaagtcga tacagatcgc gacgggtana 300  
tcaacctcga cgaattctca antctctgtc gctcgtcttc ctccgccgna gagatccgtg 360  
acgctttcga tctctacgat caggacanna acngactgat atccgcctct gaancttcac 420  
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actgtggatn ctgacagt 498

<210> 4510  
<211> 459  
<212> DNA  
<213> Arabidopsis thaliana

<223> Clone ID: LIB22-034-Q1-E2-G12

<400> 4510

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agcgtttccg gtgaatcttc tctctccgat atgattcaga cagttcattt ttctctctga 180  
aaccctagaa tcggcgagac tcgcgggtgtc atgcatctaa tttccgacaa tgctgtttcg 240  
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cttgggggtgc ccaaccacat gacatatgca gatttttgcc agttctgcgg ctcccttcatt 360  
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<210> 4511  
<211> 438  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4511

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caatctcttt gagagaatgg atcgaatggt tgcttatggt ccaacgtttt gcgatatac 180

ttggggagct ggtggatcta ccgcagatct aacgcttgat atagcttcga ggatgcaaaa 240  
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 tgatcatgct cttgagacta ttagatctaa tgggattcag aatgtgcttg ctcttagagg 360  
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 catgctccaa ctgtgatgtt ggctaacttc attgctactc caatagaact aagtcttgtg 360  
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 aatctaactg aaactcatag ctgaaaaatg aagagagatc atcaccaatt ccaaggtcga 180

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 tacaaaagta ggtcatcgga gatggcggag gttgctttga aactcgaaca attagagacg 360  
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agagacacgc taggtcctca caaacctcta ggtggaaact acatcgtttg tgactaacag 360  
aacgcagact tggttggtcc tgctcaagat gatnaaccga taaaatcaaa ctctcctta 420  
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acaatcgaaa ttggacttca cggattccat cgatgaanat gggaacaatg atcatgtana 180  
tattgtggct gctgaccaag gagaaagtat gatggacaag gaagaggttt tcagcagtga 240  
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tgtgttttct cctcacgaag gtttttaagg tcatgaaggt tgaggaagga atgacattag 240  
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 gaagtgacac tagagagtct tcgaagctgc attggagttg tccctcaaga tactgtgctc 240  
 ttcaatgaca caatatttca caacattcac tatggaaacc tttcagcaac agaagaagag 300  
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ggtgaattgc ccaagaacct cagtaagcna caagctctcg agatcttttag ctcanggcaa 240  
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gaagggcatg atgattatgg acttctagtg agtgagaaag ctaagaagta cggaatagtt 240  
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gaggctcggt tccaagaagg gcttgagtgt ggtggtgctt acttaaagta tctccgtcct 360  
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tcacagagaa cgaatccaac gngtggagaa cgccgccgga nggtaataac anngggaaga 360  
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 <212> DNA  
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tacccggccg gagataatcg ccaagtacga agatcttcga gcgagtcgga tccggagctt 180  
acgccgacgt ttacagagct cgccgtctct cgcacggtct aatcgtcgcg ctcaaggaga 240  
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ctaattgtagt tgttatgcac gaatacttct ggcgtgagga agagaacgct gtgcttgtgc 360  
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cgatgacgat caaaaactcc gcgccttttt cgacaagagg ctctctcagg aagttagcgg 180  
agatgctcta ggcgaangga attcaaagg gatacgatt caaagatcat gggagggatg 240  
tgacaaagca agggttccca atgaaacaag gaattcccaa ctccaanggg cgtgtncctg 300  
cctttgcctn aaccgaaggt aatccttggt ttaaaggaca cgggaaagga ggactgggag 360  
aagaaggaga cgaaaagtcn gtcccgtggt ttgcaatgtg aaccctgacc tgtctgttcc 420  
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<223> unsure at all n locations  
<223> Clone ID: LIB22-033-Q1-E2-H6  
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<210> 4538  
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<212> DNA  
<213> Arabidopsis thaliana  
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<223> Clone ID: LIB22-033-Q1-E2-H7  
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ctgagtccac aatcactggg ctgaatataa ctggatatgc tatagcgctc tgtggtgttg 180  
taatgtacaa ttacataaaa atcaaggatg taaaagcgat tcaaccaacc actgacagcc 240  
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gaggattgga gcttaacgat gaagaanccc ctctgataac gtcgcggttg tcgcatattg 360  
gccggactca ncttggaac acacggcagt ctganaatga ccgttaatgt tgttcacttc 420  
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<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-034-Q1-E2-A1  
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 tcaatgaggt taatcagttt gtcctaaatc taaaacactc gaaaaagtat attctcgtcc 240  
 attgtacaca tggacataat cggacagggg tcatgatagt tcattatctc atgcatctg 300  
 ggccaatgaa tggtacacan gctttgaaaa tcctttccga tgcccgccca actgggatct 360  
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<210> 4540  
 <211> 430  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-034-Q1-E2-A10  
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 gtgttcttaa gtattgttgg tcgtcctaag cacactgggtg tcatngttgg tatgggtcan 240  
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 cnantccaac atgggtattgt nagtaantgg gatgacatgg taaagatatg gcatcanact 360  
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<210> 4541  
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 <212> DNA  
 <213> Arabidopsis thaliana  
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tcgtctctct ctttcaatcg gaggttaatt gtttttctgt ttgggggtca aagcgaagat 240  
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gaacctcgag atctgtgata tgctcaatag cgatccagcg caagcaaaag atgttgtgaa 360  
aggcattaaa aaacggattg gtancangga atccaaaagc tcaaccttct tgcccttaac 420  
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<210> 4542  
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<212> DNA  
<213> Arabidopsis thaliana  
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gcttatctgt tatgatccag ctagtagaag ctactactat gggagatgct gaatgacaaa 360  
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<210> 4543  
<211> 441  
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<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<210> 4544  
 <211> 506  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 tgttcttctt ctgcttctcc cattccttcg atttttgctt caatggatgt ttgatttgct 180  
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<210> 4545  
 <211> 458  
 <212> DNA  
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 ccggccgaca gactctgtcg tcggaaactg ccgacggag gcgagtcctt tagttatggc 240  
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<210> 4546  
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 <212> DNA  
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<210> 4547  
 <211> 445  
 <212> DNA  
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<210> 4548  
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<210> 4549  
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<210> 4550  
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<210> 4551  
 <211> 451  
 <212> DNA  
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 <223> unsure at all n locations  
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<210> 4552  
 <211> 455  
 <212> DNA  
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<210> 4553  
 <211> 449  
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 <223> unsure at all n locations  
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<210> 4554  
 <211> 437  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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<210> 4555  
 <211> 498  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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<210> 4556  
 <211> 467  
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 <211> 470  
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<210> 4558

<211> 450

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

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cgtgggctct tattgacgcg acgggacaga gtgagccact cgatgttgat aagtatgaga 360  
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<211> 435

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-033-Q1-E2-B5

<400> 4559

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<210> 4560

<211> 502

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-033-Q1-E2-B6

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naagctttta gctccagatc tgtggaaccg ccatagctat ggagtttttag agaagttcna 180  
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<211> 537

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations  
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gggttcttct tagtttcgac agattcttga tccgttttag ttgttacgct catcttttct 180  
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acccttccc aaaaaaaggc cagccctta atgggttccc caaanggggtg ggttggggaa 480  
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<210> 4562

<211> 503

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-033-Q1-E1-E3

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aggaacgata ccacagtttg gctccaatgt actacagggg tgcagctgct gctattattg 240  
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acgcaaggaa aggtgtctgc agaggaaggc agagatatat cctcaagaga acaagccttt 420  
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<210> 4563

<211> 510  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
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cgccaaaggc gggagaagga ngttggtacc ggaagtgaaa tgtttgatga actgatgcct 420
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<210> 4564  
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gccgttcgtg taancctctc tccgtctccn cgttctcct cccgggagaa cgaacgaang 480
  
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<210> 4565

<211> 490

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-033-Q1-E1-E6

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gtcacctaaa ttcaattcac tggccgtcgt ttacaacgt cgtgactggg aaaaccctgg 180

cgttacccaa cttaatcgcc ttgcagcaca tccccctttc gccagctggc gtaatagcga 240

agagggccgc accgatcgcc cttcccaaca gttgcgcagc ctgaatggcg aatgggacgc 300

gccctgtagc ggcgcattaa gcgcggcggg tgtggtggtt acgcgcagcg tgaccgctac 360

acttgccaag cgccctagcg cccgctcent tcgctttctt cccctccent tctccgcaac 420

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gcttcagatc cctctccata agcagacctt atccaccaat cgtgatctcc tctcgccea 180

aactcccgct gatctactcg ccttcaccga cctcacggac ccaaacctcc cctctcctc 240

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tggaagctcc tcccgttact cctgccggat cttcggggaag gaagatgacc gtcgatgact 360



ccacggagct atccccataa gtccttgaac gggaggggtg atgggattaa aaaataattt 360  
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<210> 4569  
 <211> 532  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 <400> 4569

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 cttacactcc tctcgtcgga gatataaaga ggaatgttga tatgatgatg gaagcgagat 240  
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<210> 4570  
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 <212> DNA  
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 <223> unsure at all n locations  
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 <212> DNA  
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<210> 4572  
 <211> 509  
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<210> 4573  
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 <211> 507  
 <212> DNA  
 <213> Arabidopsis thaliana  
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<223> Clone ID: LIB22-033-Q1-E1-E2

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<211> 496

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-033-Q1-E1-C4

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 gatangcggg ctactcgatt tggcaacctc nttggatttc tgatgatnaa tcnttttagcc 420  
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 gcggtatttt gaaacgggac tgggttgctta agcatcgac caaggtcct gcacttgctg 360  
 ccgccttctt tccctcacat cacatcttcg gcgattcaac tcaatggcta caggctctgt 420  
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 tanattacnt gacactaaca gaaggatg ataatgtga gattgtttta cctggtggnc 360  
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tccctgatgt caggtttgan acggttgatc tagcaactag ggtgctggta cctatcattg 360  
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tgactcttgt tgcgaattcg gatcggctga cgcagctccg attgcacaac aatggcttct 180  
cgtatcatca atcattccaa aaagttgaaa catgtttccg ctttactgcg gcgtgaccat 240  
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tcttcaangg cccgcctgaa ttaatcccnc ngttaagaag aattcaaaat gtggnactgg 360  
naatgttaca atgcntaant ggggattcaa aaacgggcac aaaactnagc agcccaatgg 420  
gaggggcaaa actattttta gantttaagc cccagatggg atnagtggag gggt 474

<210> 4611  
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<212> DNA  
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<223> unsure at all n locations  
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 aagtttactc caaggctgat gggatgggaa agttagaaga aagaattaag ntttactggg 420  
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 ccctgattgc gacggtggtt tctcgaact catccaagag cctctcgatt tcacaccttc 240  
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gatcggttg atccagggac acctgttccg atcatcaaag gtgctagacc gattcccggga 180  
cgacatcctt tacttggaac tcttgagcca ttgatgagta caagaggaaa gattgagagt 240  
tcgagaccta gaagagggttc ttgggggtcaa aacgggtgacg tttcgtctcc gtttgtgtta 300  
aagcctgcac ctttggattt tgatcagtgt acgccggcga aacatangct tggtaggggg 360  
agatttatgg cggcgtctcc gaatgttatg actagagga ggtcacctgg gtggngttaa 420  
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<212> DNA  
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ctacaacaac caaaaaatga tcaagctttg cttcatgact tctcatgggt attcaatccc 240  
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tctggtgaat cccggagcaa gacaagagat catacctgca agctccttca atctgaatac 360  
agaactcttg gaaccatgga aaccgggttc ttcatttagc caattcgtgg agattgattc 420  
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<210> 4617  
<211> 482  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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 ctgttcacaa gcttgaacaa gaatctgggt ttttcttcaa tatgaagtat tttgaggatg 180  
 aggttcacaa tggaaattgg gatgagggtg agaagtatct ctctggtttc actaaagtag 240  
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 ctttggataa gcatgatcgt cccaagggct gttggatata ccaatgaagg gatttgaaag 360  
 tgtttcaa at ttaatagaag gagcctttca agggaaataa cacaactcct tgacattggg 420  
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 <211> 484  
 <212> DNA  
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 cggccagtga tgtcaaccct tgcggtcgcc gaggagtttt ctgcgagaga cggcacnctg 240  
 ccaccaccgg agaatacgtt ctccgtgtca cnaggctcgt ctaccgatnn aggagcttga 300  
 cggggactat cntccgggtc atcggaatgt tttccgganc tcaaagggaa cttaacttgg 360  
 tcnaataaac aatttggcaa acgntgggtc ccgggtggga taaccttaaa nctgttaagc 420  
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 ggaa 484

<210> 4619  
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 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4619

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aaagacatgt ctcaagccga tttcgggtcgt ctcgaaactcg agctcgccga ngttgagatg 180
cctggactca tggcttgctg taccgaattc ggaccttctc agccattcaa aggcgctaga 240
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ctcggtgctg aagtcagatg gtgttctctg aacatctttt ccaactcanga cnagnccgcc 360
gcagccatcg ctcgngacnc cgnccgtgtt ttcgcttggg anggtgagac ncttcaggag 420
tactggtggn gtaccaancg ttgcncaaaa ttgggggtcca nggggnggtc ctgatcggat 480
ggttgatnac gg 492
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<210> 4620  
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<400> 4620

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gattggaatg attcaactga cccttaagtc agggtaaagg aaaaggaact tgaanttttg 420
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 cacagtcttg tacaagctca agctcggaga gattgtcacc accatcccta ctattgggtt 240  
 caatgtggaa actgtggaat acangaacat tantttcacc gtgtgggatg tcnggggggtc 300  
 angacaagat tccgtccctt gtgngacac taattcaaga cactcaangg tccaaacctt 360  
 gggtgttgat aacaatgaca gagacagagt tgttganggt cnanaagaac tccaanagga 420  
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<210> 4623  
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<223> Clone ID: LIB22-031-Q1-E1-C8

<400> 4623

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gaggaagaaa ctgtggaaac caatgtagat gcagtgaaag aggacaatgc aactatagct   300
aatgaaagca gaagcccaga gagtgtttct gcagtgtctg tgggtgtcaaa tcgagctgct   360
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aagtcnaca gctggtnaat ttgtcccgac gattcaatcn ccggaagga tccacntatg   420
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 taccaacntc ctctcaaca atcctcacna anggcaatgt gttaggaaca accatacctg 420  
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 caaatgagac atgggaggtt aatcttcccg ttgaggaggt cctcctgag cttcctgaac 360  
 caacgttang catcaatttc gcaagggacg gaatgcaaag aaaaagactg ggatttcttt 420  
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470

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agctaagttt aaggttgaag gcaaggaaga gaaagaagaa ggggaagatg atgaagaagt 360  
tgtggaatca gannnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 420  
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aaaaannnnc attngggaaa cctttgaaat gtcnacngga ttanatatgt ctctcgacga 120  
catgatcgcc aagaaccgta agtctcgtgg tggagccggc cccgctcgtg gaaccggatc 180  
cggatccgga ccgggtccga ctgcgccgaa caaccctaata cggaaatcaa cccgatctgc 240  
tccataccaa tcagccaagg cgccggagtc cacctggggg cagcacatgt tctccgatag 300

atctgaagat caccgatcgg gacgttcctc cgccggaatc gaaactggga accaaagctc 360  
 tacatttcca aatttgggat tacggtgtca tgaaacgaaa gacatcaagg gaactggttt 420  
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 ggaccgagag acaacattct tgagttcttt gagagctttg ggttcaagtg tcctgagaga 180  
 aaaggaacag ctgatttctt gcaagagggt acttccaaga aagatcaaga acagtactgg 240  
 gtgaaccgga acagacctta tcactacatt ccggtttcag agtttgccag tagatacaag 300  
 agtttccatg ttgggacgaa gatgtctaac gaaacttgca gtaccgttcg ataagtctcg 360  
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 aaagaact 428

<210> 4636  
 <211> 438  
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 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 cgataacagg aaacaaagat acagtcagta ctcagtagtt tgagggcacc tacggaaagc 180  
 aagtaatact acagagggtg gacgttccag tgcttaatga tgaaacatca tcagtacaag 240

caaacgtggt tttcatcata caccgtatca ctttcacaag tggctgcagt cattccgcag 300  
cataagggag attgacttcg agaagcaaca tcaactttgc gcaaaaggan canggctacc 360  
agganatggg ggactcccaa ttgcnaencc tttcaggana natcccccta naanggaaag 420  
gccttttcaa aaccaagg 438

<210> 4637  
<211> 446  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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<400> 4637

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tctcattttc ctctctctct ctctatctct catggtcttg ggcttgctct ctctgtttat 120  
ctttatccca atcgatcatc gtagcaaata tggtcgtaag ctcgctaggt acatatgcaa 180  
gcacgcgtgt aattatttcc ccgctctctct gtacgtcgag gattacgaan ctttccagcc 240  
taatcggtgc tatgtctttg gttatgaacc acattcggtg ctaccgattg ganttgtngc 300  
tctttgtgat ctacanggt ttatgcctaa tctaacatt aaagttcttg caantagtgc 360  
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taaggaaaaa tttaaattcc ctttgg 446

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<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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<400> 4638

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gagaaatttt cgancangag ggagatcatt ancattcata tcggacaagc tggatttcag 180  
gtcggaaatt cttgttggga gctttattgt ctcgaacatg gtatccaacc cgatggcacc 240

atgcccagtg atagtactgt tgggtgcatgt catgatgcat tcaacacatt ctttagcgag 300  
acaagctcag gccaacatgt gcctccaanc tgtgtttctt gatctccgaa ccaaaccgtc 360  
attgacgaac ttacgaaacc gggacttaca agacaagcnt ttccaatccc cgaagcaaac 420  
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caattaacaa ccggttttgg gaaaggggaa aaattg 516

<210> 4639  
<211> 502  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 4639

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aggcttcttg ctcttggaat attagagccc ctcatggacc agaatttgta ctacatagga 180  
ttgaaaaaca catcagcatc gtacacttct gcctttacca atgcacttcc cgccgtcacc 240  
ttcattctcg ccttcatttt caggcttgag acggtgaact ttagaaagggt ccacagtgtt 300  
gcaaaagtgg taggaacggt aataacggtt ggaggagcaa tgatcatgac tttgtacaaa 360  
ggtcgggcca ttgagattgt gaaggccgca cataattctt tcaacggtgg gttcgagcaa 420  
caaaacccaa ccgggcaaca attgggtccc ttggaacata accaattatg gggcaantac 480  
cccnacaatg gggctgcttt ct 502

<210> 4640  
<211> 456  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-030-Q1-E1-A2  
<400> 4640

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caaggaacca ccagcaccag attcatcatt tacgaccacg atgctcgtcc tgttgcttct 120

catcaagtcg agttcactca gttctatccc gaagctggat ggggtggaaca cgatccaatg 180  
gagataactgg aaagtgtgaa agtgtgcatt gcaaaggctc tcnacaaagc cactgccgat 240  
ggacacaacg tcgacggtgg cttgaaggcc attgggctta cagatcagan agagactact 300  
gttgtttggg gcaaateccac tggccttctt ctccacaagg ctattgtccg ggattggatg 360  
ctcgtaaaca ctccatctgc aaggagacta agagaaaang aactccccgg gaaggaaaat 420  
tcccaatttt gtgggantcc ttgccgggtt gccaaa 456

<210> 4641  
<211> 484  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4641

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agtataaaac agtcagaaga tgtcactgat gcaacaaagt caaagaactc acatgcgatc 120  
tgtgagcttg ggctgtcaat aatcaatcac ttaactcaga aagagcctga tctacaaggg 180  
gaaatcacac ctgtatcgct gcctccgacg ctgtacaaac cttctgaaaa agttgaagga 240  
gacaagtctc aggtaggtga agaaaaattg tggctagctg atgagactgt cctgttacac 300  
ttcagggctc tcaagttgga gagtcatgct gatgcatctg tgatccccca aacttcagaa 360  
aatgagggtta tgattgatgg ggaaagtgat ggaaatgaaa ttcctctggg gtaaatagta 420  
nagcgtttga nactcagga accaagacta gaaagggcaa aaaggataaa tccgtccagc 480  
tgaa 484

<210> 4642  
<211> 494  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
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 cagagactaa aaaggctggt caaacagtaa taattcttgc acatgaacac taaaccagaa 180  
 cgataacagg aaacaaagat acagtcagta cttagtagtt tgagggcacc tacggaaaagc 240  
 aagtaatact acaganggta nacgttccag tgcttaatga tgaaacatca tcagtacaag 300  
 caancgtggt tttcancata naccgtatca ctttcacaag tggctgcagt cattccgcag 360  
 catannngana ttgacntcga naancagcat caacttttgc gncaaaaagga ncaagggcta 420  
 caaggaaaat gggggacctc cccaatggct nacgcccttt caagganaac atcctccctt 480  
 agnaaggagg aagg 494

<210> 4643  
 <211> 451  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-030-Q1-E1-B1  
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 tatgtgatac atataaaagc cggagtttac agagagaatg tggaggttgc taagaagaaa 180  
 aagaatataa tgtttatggg agatggtcgg acgagaacta ttatcacagg aagtcgaaac 240  
 gttgtagacg gtagcaccac tttccactcc gccaccgttg ctgctgtcgg cgagagattc 300  
 ttagctcgtg acatcacttt ccaaaacaag gcgggtccgt cgaagcaaca ancngtggct 360  
 ctcccttggt ggntccgaat ttcccgncct tcnanaattg cnaaatgtta ancttaacaa 420  
 ggacactcct nataacgttc antcctaaac c 451

<210> 4644  
 <211> 467  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-029-Q1-E1-F9  
 <400> 4644

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 cggaggcgaa gaaatctccc ttctccgtga aggtcggttt ggctcagatg ctccgtgggtg 180  
 gtgttatcat ggatgtcgtc aacgccgagc aagctcgtat cgccgaggag gctgggtgctt 240  
 gcgccgtcat ggctttggag cgtgttctctg ctgatatccg cgctcaagga ggcgtcgctc 300  
 gtatgagcga ttcacaaatg attaaagaaa tcaacaagc cgttacgatt ccggtgatgg 360  
 ctaaaggcta ggattgggtc attttcgttt gaagctcaaa ttctttgaag caantggnat 420  
 ccaattacat ccgaataaga gccaanntt ttgactcctt gccgaag 467

<210> 4645  
 <211> 437  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-029-Q1-E1-D11  
 <400> 4645

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 ctaccaatgc tgattctgtt gatcatcaca cagcaatatc ttaaacaatgc attctcaagg 180  
 atttctatga ttcttgaaag atatgcttta cttgtttgcc tggctatcat atgggctttt 240  
 gctgctatcc ttactgtttc tgggtgcttat aataatgttt ctaccgcaac aaaacanagt 300  
 tgtcgaactg atcgtgcctt tctaagtcac caagntcctg ggattagaaa tcccatatcc 360  
 attccagtgg gggactccga tattcaaaac gantcatggt tttggaatgt tttgggtgctg 420  
 caaatggctg caatctg 437

<210> 4646  
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 <212> DNA  
 <213> Arabidopsis thaliana  
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aagtttctat ttttagctct tattttgatc cagttgctgt ctactcaact ctttgtctcaa 180
agatctaaaa gtccatggca aacactcact ggagatgctc cccttgatcat tgctcgtggg 240
gttttctggg ttgttgccag attcaagtct cgatgcttac agttttgtat cgcagactag 300
tgttctcgtt gctgttcttt ggtgtgatgt gcaactaacg aaagatgcaa ttggactttg 360
cttcctgat gtgaagatga tgaatgcttc aatatcaana gttacccaaa cggaaactct 420
acttgctaan g 431

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<210> 4647
<211> 495
<212> DNA
<213> Arabidopsis thaliana

<223> unsure at all n locations
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<400> 4647

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nnnnnnnnnn nnnnnnnnna ttctgttggt ttgcaatgg tttggagggt cgtaaatggc 180
gtcatagact cgggagatta agggagaaca agtactctgc atcttctgga tttctcacta 240
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gttctccttc gtttgataa agcctgccgc ttcttaaggt tctttggaaa ttctcaagtg 360
atggaggaaa atctggttta cttcgcatga gctattaacg aaattcatca tgaatgtctc 420
actgtcacac ttgtgggaan tatgcgttga atgattgtca agaaaccgat tctngttccc 480
nacttcgttt gaacc 495

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<210> 4648
<211> 335
<212> DNA
<213> Arabidopsis thaliana

<223> unsure at all n locations
<223> Clone ID: LIB22-029-Q1-E1-E1

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gtggatttgt gtgtgtgtga tgtgtcgggtg agtgtgttat agaagtcact atagccatct 180  
tcaaagggga gatagagcta ggagtagtat ttgggtgggtg cacgtcgttt gttttttcta 240  
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atttatcact aaaaaaaaaa anaaaaaaaaa aaggg 335

<210> 4649  
<211> 424  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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tggctgggtc aatcggagtt tcggtagccg tactccgatt cctcctctgt ttcgttgcca 180  
cgatccctgt ttcattcgct tgtcgaatcg tcccagtag actcggtaaa cacttgatg 240  
ccgtgcttc aggtgntttc ctctcttacc tncctttgg cttcaccncc anncttcact 300  
tccgtgttcc gatgacgac ggatatnntt caatgggcga ttanagacc caaagtgtgg 360  
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aata 424

<210> 4650  
<211> 458  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-029-Q1-E1-E2

<400> 4650  
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aactcatctc aagggcaagc tatctctctc catcaactcg ttttctcca agattcagtc 180  
tcatgctctc cgaggagttg gtataggcga gtcagataag aaaaatcccc tgccgcgagg 240  
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<210> 4651  
<211> 517  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-029-Q1-E1-E3  
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attcaaataa aacagagact aaaaaggctg ttcaaacagt aataattctt gcacatgaac 180  
actaaaccag aacgataaca ggaaacaaag atacagtcag tactcagtag tttgagggca 240  
cctacggaaa gcaagtaata ctacagagg tagacgttcc agtgcttaat gatgaaacat 300  
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gtcattccgc agcataagga gattgacttc gagaagcaac atcaactttg cgcaaganga 420  
ncanggctac aaggagattg gggaactccc aatngtacgc ctttcaggaa aatcncctta 480  
naaggnaag gcttttgcaa ggcaagggt tcttggg 517

<210> 4652  
<211> 502  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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acgtgagctg cgaggatcga ccaaagctca tgtttgacat tgtatgcacg cttacggata 180  
tgcaatacat tgtgtttcac gccacgattt catcaagcgg ctctcatgct tctcaggagt 240  
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aaatgtctgg aagctgcaat ccatagacga gtcagcgagg gttggagttt ggagctctgc 360  
gcaaaggaca gagttggatt actgtcggaa gtgacaagga ttctgagaga gcacgggcta 420  
tcaattgtcc nanagctggg gtgacaacaa ttaggagaac aagccgttaa cgttttcaag 480  
tgaaagatgc ttcaaggaat cc 502

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<211> 481  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-029-Q1-E1-E9  
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catctttcat caatccaatc tctcaaataa gcgagagaga aacaaagatt atcgaatcct 180  
tgagacgaa aacatactcc aatttgtaat tttctcgtct ttttttttac ctgattttgt 240  
tatacgtttg atcgaaatca ttgctctga tggatctctg ttttgtaac ccttttgaga 300  
tttggtagat atggttttga ggattgatat attgcccgt gattgtcgtt gaaaaattgt 360  
gaaatttgat ttggtggttt agggttaaaa tgaaattata tgatgaggaa tataagaatc 420  
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<210> 4654  
<211> 500  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations

<223> Clone ID: LIB22-029-Q1-E1-F2

<400> 4654

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caatggcgat atcagtacaa cagtcgtctg ttttactcct ctccactctc ctcatcgcca   180
tcaccttctt cctcttcacc tccgataacg ccagattccc tttcccttct ctctccacca   240
ccgattacta cacaccaatc ccaaaatctc caattcctca ccgaatcgtc gacgtttctt   300
cagatcaaac tccacagaag atgaagctaa acatttcctt cgagggtggga gagctgaaat   360
gggatctatg taaagggtgca gaatctgttg attacatacc ttgtcttgat aattacgccn   420
gccatcaagg aagtcaatca agggagacat tatgggggaa tcgagaaaagt caattggccc   480
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<210> 4655

<211> 437

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-029-Q1-E1-F6

<400> 4655

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cgataacagg aaacaaagat acagtcagta ctcantant tgagggcacc tacggaaagc   180
aagtaatact acagagggtg gacgttccag tgcttaata tgaacatca tcagtanaag   240
caaacgtgtt tttcatcata caccgtatca ctttcacaag tggctgcaat cattcccgca   300
gcataaggag atttgacttc gagaagcaan atcaactttg cncanaggac aaggctacca   360
agaaantggg aactcncat tgctaancct ttaagggaaa tcccttaaaa nggaaggcct   420
tttcaaacaa ggcttctt                                                    437
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<210> 4656

<211> 424

<212> DNA

<213> Arabidopsis thaliana



<212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
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 ttagaatacg ggTTTTagtg taaaaggagt gtagagtggg atttgaatga ttgggaatgg 240  
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 ctctgatgaa aggaaatgtt taaatcatgg anaagaaagg ggggttnana tggggaaaaa 360  
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 gcagcatgac caggcattat catcaccatc agggctgaag gagagggtgg cttgcgccat 180  
 ggggcacctg caagaggtga tgggaganag ggagttgctg atccaactgt ggggtgcctgt 240  
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 ctcccaaaag ccaaaacctg gcctctaacg atgacncTTt cactggctac agcttccaac 360  
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tcggtggtgc tcggctttga aattgaggat gagatccttt ccacttcctt ctacctgctg 180  
acaatgggca actgcggtac tanagacgag gctgccgtct tcactcctca agctcaagcc 240  
caacagctcc agaanaagca ctgcgatcc gtctcanatc tgagcgatcc atccactcct 300  
cgcttccgag acgactctcg cactcctatt tcgtatgccc aagtcatccc ctttactttg 360  
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<223> unsure at all n locations  
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<400> 4661

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ggcctcaatc agctaagatt tttgtgcatt gtatgatgag tatagcaa at gaacaacaat 180  
ttgccatgga tcaacttgtc gaaaccaatg atgattcnga aaagaaacca agaattacat 240  
acacnaggaa gtttcntata tccttgagcg agaaagacgt ttgcaagaag ctgccaaatc 300  
tgcttggtga atttgatgaa gcactgttgc ctgacttcna agatccttca cccgancgaa 360  
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<213> Arabidopsis thaliana

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<400> 4662

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cgggtgaattt tgatggaaga aaagctgcc aaatcgctca agaatctcga tttgaatacg 180
aatcgtgggc gtggaccaga gaataagatt cttgtttcag cttatgtatc ttcgtcacga 240
atgtctccac tgaaatcaaa acctccatct cttgtgagct catgtcttgg tgttattggg 300
aagcatttgg aggatatgat tcgttgttta actgaaatcn ctgttatatt tcctgcagac 360
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<210> 4663  
 <211> 496  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4663

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aatccgagat aagtcatgag tttcttcaaa tgggtttctt ttgttttgat ccttcacttg 180
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catgagaatc cagagttagg ttatgaggaa gtagagacat ctaagcttgt tagagcagag 360
ttggagaaga tgggtgtttc ctaaaagtac ccagttgctg ttactgggtg tgttgggtaa 420
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<212> DNA  
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 nnnnnnnnnn nnnnnnnnnn nngggcggcc gctctagagg atccaagctt acgtacgcgt 240  
 gcatgcgacg tcatagctct tctatagtgt cacctaaatt caattcactg gccgtcgttt 300  
 tacaacgtcg tgactgggaa aaccctggcg ttaccaact taatcgctt gcagcaacat 360  
 ccccttttc gccaaagtgg cgtaataacg aaanaaggcc cgcaaccgat ttgccntcc 420  
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 cagttgatcc atctgtccta tacgagcaag acctccatgt ttcttctgct gtttgggaag 180  
 gacaggaacg aggtctactt cgttgtaag aacacacttc attgctacat caatggaaac 240  
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 ccaatacttt tcatcttctt ttaggagaaa tgactataac cttagacgaa gttgcttant 420  
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 ggana 485

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 <211> 421  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
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 cgtcgcattc gccgcggtat tegtctctac ctccgcactc tctccgcctc accccgagac 300  
 caagctctcg accaggctgt tctcgacaag attccgatct tcgtttaatc ctccaaagaa 360  
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 a 421

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 ggaaaatcta tagttcctaa tggtatcaga gtcgtcgaac tcgagaggca gcgtggtatt 180  
 ctctgaatct gggttgttcg agaacatgat cgtcaaggaa gagatgttga attattcagg 240  
 cgccataact acagttctga gaaagtcggg ccagttatta aaggcaccgt angancagaa 300  
 ttggttgatg gattgatgat caacgaagaa gatgactata aagattgtga aaactcgttc 360  
 agttgccttt cttaagtac caatccttca atcccttctt gcaaaacttc aaggggggta 420  
 ccaaanttta ntgaattgcc tgggtgttgc aaacncccg actgtttccc gggaaaa 477

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acccttcga gatttgggtgc gatgatgttg cgtgctgttt ttaggagagc ttccattaga  180
ggctcttctt ctgcttcggg attgggaaaa tcattgcaat cctctcgtgt tgcagtgtct  240
gctcaatttc attctgtttc agcaacagag acgttgggtgc ctctgtgaaa ccatgctcat  300
agcttccatc accgtttcttg tccaggggtgt ccagactgtt caaggactat tatcaacggt  360
taccaaggca cagccctgca aagatgggtc aaggcctttt catctgataa tggggatgtc  420
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tgtagagat tcttcttctc ctctgctttt ctattctctg ggagctcgat gatggatgat  180
aaagctcgca aagaagaaga acatcatgtg tctaccaaac ataatcattc tcctctgcaa  240
agggatggaa attctgctga gattgcacaa ggacaagagc tatcatcacc gggccgagac  300
ctatggaggc gangtctgtg ttagatttac catcaacaac acctgaagat actacaagag  360
atgatctttt agacgaaatg catctttaac ntcaagtcct gttgccaaaa gaatcaactt  420
ttctccaaag gtccaaccct a                                             441
  
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[illegible]

**THE** **NEW** **YORK** **PUBLIC** **LIBRARY** **ASTOR LENOX TILDEN FOUNDATION**

**THE** **NEW** **YORK** **PUBLIC** **LIBRARY** **ASTEN LENOX TILDEN FOUNDATIONS**

[illegible]

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gtcgccaagg cagttgatat gaaactacta ggctctctta gcagagacga tttgaagaaa 300  
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tccggaatgt agttcatttt tccttccaaa agctgccatt ggatttatca caaaccttgc 300  
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tgattctgaa gatcaaagtg actctgaagt ccttggtcaa gaaacagcaa gaatcatatg 420  
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cagcaaccgt acgtctccga gctcctctct ttcactcttg atcgtctcca caaggaaccg 240  
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tctcatgaac tgttcaaggt ctccgtggag tcatcaagat gagttgatta gccctaagaa 360



ccaagtgttc tatttggacg tgtctatgaa actctgantg atgaggaaac ctctgtggaag 420  
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 gctgccaaat tggtgaaacc agtttccttg gagcttgggg gtaaaagccc tatcattgtc 180  
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 aatgggcaga tttgtagtgc cacatctcga cttcttgtgc atgaaaggat tgctgacgag 300  
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ccagtttgac tccaacggcg acggcaagat ctcagtcctc gaactcggcg gtgtgtttaa 240  
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atagtaagtg atacaaagaa gttggcagat gcttctaaga gtacaaacct tataccaaat 300



caagccctta ccaaaagtct tccccttcaa gccctcaccg aaagccttcc tccccaagcc 360  
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gaaacagaaa ctgcatcgac ggagaaacaa gaggttaaag acgaagcatc gcagaaagaa 300  
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agccgcaaaa tttaatggca gacgtcaagg ttcaatccga atccgaatcc tcggattctc 180  
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caccggtgtt aatgcctcag atgatgtacg ccgccgccgcc accgatgccg ttctcacctt 360  
atcatcaata tccgaatcac caccactttc accatcaate tcgtggtaat aagcatcaaa 420

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ccctcgcgaa tggtttccag aggttgata agattaagga ttcaactaga caaagcaaac 360  
aacttgaaga acttactgac aagatgagag agtgtaaaag attggtcaaa gagttcgacc 420  
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gagagactta gagtgaacga cccaaatggc caacagattt gaatctgcta gtgtggcaga 300  
aagactgtcc agaaattagt aaaccggttt cattgtagtt taaatcctaa tactttcttg 360

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agaaagactt caactcaatt tcttgctga aagaattgaa aatcttgag aagacaccag 180  
taagagtgtc tcaccgacga agtccactgg accgtgaaaa gattatacat tggatgaaag 240  
ttgaaaagat aaaaggacac tctcactact ttctattgca tctgtgcacc cagagtttgt 300  
tcatggagat cttggtcgta ccactcccag catgggatca attttagggg gcanagcgga 360  
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<212> DNA  
<213> Arabidopsis thaliana  
  
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ccgcatgggg tttctgacta tggaagttac ggtggtgctc cacctcgtcc agcgtcttct 240  
ggtcacggtg gcggatacgg aggttatcct ccgcaagcct cttatggaag tccttttgc 300  
tctctgattc cgtcaggttt tgctccgggg acagatccga atatagtggc ttgctttcag 360  
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tcntatcaac agagattcag tatganaact gttcancctc ctaagtacca a 471

<210> 4694  
 <211> 431  
 <212> DNA  
 <213> Arabidopsis thaliana  
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 acaagaacga tgacaacaca taaacataga agaacagaga aaaatctctg ttttaagcaa 180  
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 gaccatgac aagatcatag atcttctact tccatatcaa agcatcttct tactaaccat 300  
 aaacctaagc ttttcgcttc tcgtgccatg tttgaatcta aaatccatga tcacaaactt 360  
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 aaccactcct acctccgtgg antgttctcg cgaattccgt caccgangaa cacttcgttc 180  
 actcatcgaa tgcattgatt catactgttg cacttaccaa caacanccat accaanacga 240  
 caccctttca gtcnctcca cttcatntc gtntcatcc tcagaccact cttcncctc 300  
 ccanagtagc antaccgtat gtggaacttt cttcggacac cgtntggcc gagtcagctt 360  
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gaaaccaatg tcaactcagta tgaaagacct tctgcgctc ctccccactc tgccacaaca 360
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<210> 4697  
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attcgcttac ggatacagag tggaggtcaa tgggtgaacc ggttatgaga tcgtatatgg 240
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acgcagatcc tgactttgga tcatgtcaag ctaaggagat gcttgatcat ctagagagtg 360
ttctcgcaa tgagcctgtg gttgtcaaga gaggtcaaca catcggtgaa gtcaaaccac 420
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484

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gcagttttgg gtcattgggtg gantatccgc tcattttatc gctgtgtttc aaggtatcct 180  
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cggagacttt gctgagctct acttggttcaa atggacaaca cttctgattc cgccaacnac 300  
nctgctcatt gtaaacttag tgggagttgt tgcaggagtc tcttatgcta tcaacagtgg 360  
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<210> 4699  
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tatgcccacg gtcttgcttg tgactatggc tatcgggtct cacaggttgt ctcagcaagg 180  
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ggagaaccag gacgctattg atgcaaccat ggttggaatg cttgctgatt cgaaagangc 420

cgagctggaa tcaagagaag ttcacttccct tccaatcaaa ccctggttga taaagagaac 480  
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ggtgaaaggc caaccaagat cggatatagc tggttttccg cgaaatctat ttcagtagag 360  
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<210> 4701  
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cgctccatat caaagccaag aaaangngat ntgaaatctg tcaagcagct tctcgaccaa 360

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cagcgttaca tggccctgat ggatcttcag gaaaggaacg agaggttgtt ctacaagctt 360  
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ttggccagaa ttttgattg cttgaggcaa agatggcaat ggcattgata ctccagagat 240  
tctcctttga gctttctcct tcctatgttc acgcacctta cacagtcttc accattcacc 300  
cacagttcgg tgctcctctt atcatgcaca agctctaate gttcgtagca acccattttg 360

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404

<210> 4704  
<211> 409  
<212> DNA  
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gttcagtctg gtgacagtga tcggttaaga gtgtggtcag atatccattg tgctgtagg 180  
ttaancggaa ctgttgcgaa aacgttggtg actctctaca ttaatggtaa cttcanagga 240  
gaggatgtga atctacttgt atgtttggag aacttcacan tagnaagaaca tncnanaant 300  
agatggagcc cagaactcag tcntgaagat naatccacac attcacaaca gcatgttcnc 360  
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<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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aagagaaacg gtaacttttt ctatttgttt tcaagaaaag ccaaagaaaa aaagaatttt 180  
taatatactc tgttttttgc aatgattttg ttttgtgaaa tttttctcgg agaagaaagt 240  
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aagaaaaana aaagcttttt cccttcntaa aaccttcct cngtttcaga agcaattgac 360  
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<210> 4708  
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 <212> DNA  
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 ccgtaacggg aagaatttca acgggagttt ccttgnttaa aggaaaaanct ttaacggata 420  
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<210> 4709  
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 <212> DNA  
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 tactentggg ttgacgaaaa gaacaagact attaacatga tcaactgagct tttcaactcc 360  
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<210> 4711  
 <211> 418  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
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 catggacaaa ctactgtca agataatgtc gtacgcctgc aaaatggctg atactacaca 240  
 agaaggagtt tcattggttg aagacatatt tagacgaaga caaccacttc cttcaatgga 300  
 tgcaatatac ttcattcagc caactaaaga gaatgtcatc atgttcttgt cagacatgtc 360  
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<210> 4712



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<400>      4713
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<210> 4715  
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aggacaaaat tactagactt gttgtactgc cattgtatcc tcagtattct atctctacaa 240  
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<210> 4721  
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gaaaccgcac ttgcgatcct tttggttctc atatcaattc aacaatgtta nggangtgta 180  
agcaactata catgtacgtg tttctcttcg ggcaatcgaa gtgatatact ggaatctaac 240  
tgttccacat catgtaattg cagaccanca gacagagatc aatgggtatg tttgtgtcct 300  
gcaaatggat ttccggttat agccattggt ggttcaaatt cgtcatgctt cacttcatgc 360  
aactgctctg ctgggtgcta caaaatcttc aaagaagcaa tatttatcga ggaaactcgt 420  
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<400> 4722

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cagggttgca ggcagcacag ccagcagggg tgcaggcagc acagccagca gggttgcagg 180  
cagcagggaa gcggaagccg cctacgacga ccgaggatcc aaatgatcca cagcatataa 240  
tccacgattt cctcacaata gtgaacaaat tggagaagga agtggatctt ccaggcgcta 300  
taaccagggc tagaacctat gatgctgagg ttgatggact gataactgct gaccaaccac 360  
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<210> 4723  
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<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-025-Q1-E1-D9  
<400> 4723

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gttggtggct gcgtaggcgg tgctttttt cttctccttg tagctaccgg tctctacttt 180  
ttcacaagta aggccgggaa aactgtgaat ccttggcgta ctggtcttag tggacaactt 240  
cagaaagtat tcgttactga tctgagattg aagctgcatg tgaagatttt agtaatgtca 300  
ttggatcttg tccattggg aagttgttca aaggaacatt atcaagtgga gtggagattg 360  
ctgttgcttc ttttgctact actactgcca aagactggga aggacagtac aagaaattca 420  
cttcangaag aagattgaaa tggtatcgaa gatnaaccac a 461

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<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-025-Q1-E1-E1  
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ttttcccttt cctggagctg gatatcaa atctttgatct tggactgcct aaccgcgatt 180  
 tcactgatga taagggtataa tgtggctatt aagtgtgcga cgattactcc ggatgaagct 240  
 cgtgttaggg agttcggctt aaagaaaatg tggaggagtc ctaatggaac tataaggaac 300  
 attttaaacg gcacagtttt cagggaaact atcatttgca gaaacatccc tcgtcttggt 360  
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 actga 425

<210> 4725  
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 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 tacaaggatt ctactggtat attttgggat aatgacagct tagccgctct tctgtcgcta 180  
 gagctgaaag ctgatctttt gattcttcta agtgatgttg agggccttta cactggccct 240  
 ccaagtgatt ctacctcaaa attaatacac acattcatta aagaaaaaca ccaggacgag 300  
 attacttttg gcgaaaagtn caaatnaga ccaaggggta ngactgcnaa agttaaanct 360  
 gctgttaang canctangg tggcgttttc ctgttaacaa aaccatgtgg ataccctctg 420  
 aaaatattta atnccttaag gg 442

<210> 4726  
 <211> 417  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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gaaaagtgac acaaacaaga acttaacaag ggagaagaaa aagcttatat tcatatcaac 180  
 gggtgacggt ggaaagctat taagatttgg ttttctacaa atttgttctt cctgaaacgt 240  
 cacgagacag agcttacaag aagagaaaac agaggaaatt tcgttgcat ttttttacat 300  
 attgattcga ttaatggatt caaataatca tctctacgac ccgaatccca acgggtcggg 360  
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<210> 4727  
 <211> 429  
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 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 gggatcgaac aactctaaag cgtcactcgt cgctttcaac acttgtggct catttctttg 180  
 gcatcttagc tggtgttctg atgctaattt ggcttctcca ctaccgtgaa ggcacgcagt 240  
 atggctccga caacccccctt aagggttttaa atgtgcaccc atttctcatg tactgtggat 300  
 ttctcttctt cgtggggccaa gcaatgatga cttacaaaac ggcgtacgcg tcgcaccaag 360  
 ttcagaaaat gggtcacggt gggcttcact taatangctt agttctaagt aatgtcngaa 420  
 tctgcgccg 429

<210> 4728  
 <211> 430  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-025-Q1-E1-E8  
 <400> 4728

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 ctcttagaga aagagaaact ttccatcaac tacgccaaact gcagaagctg gcaccttggg 180



gttgagacct ctaacatcat agacttcgac acggtgccccg caaattgcaa agactatggt 240  
 gaagactact tgatcacttc caaacagtac caatacgact ccaaaaccgt gtgcaaagag 300  
 gcttatttct atgccaaagg acttgcccta aagaacgaca ccgtaaatgt ttgggatctt 360  
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 agagaagacc 430

<210> 4729  
 <211> 408  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-E9  
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 ttaactcctg tgtcactgtc cttcttttga ctggattcct tgcaactatc ttgatgagag 180  
 tcctcaagaa cgatttcag aagtatgtc aagatgagga agctgctgat gatcaagagg 240  
 aaactggatg gaagtacatt catggcgatg tgtttcggtt ccctactcac aattctttat 300  
 ttgctgcac gctcggtagt ggcaactaat tgttcacgct caccatattt attttcatgc 360  
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<210> 4730  
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 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> Clone ID: LIB22-025-Q1-E1-F1  
 <400> 4730

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 ccactttctt tgcatttcct caaacggagt caggaaactc tccactggct aagccaaatt 180  
 ccgtacctgc aattaaagaa agagcacctg gaaaacttca gtatgctgca tctgctatga 240  
 taaggggttc ctacgatggt tctggtgttg ctggaaaggc ttctaataca gtgacatctg 300



gaatgccacc actgaaatga tgccagtcac atggccaagt ttcaccaaca tgcacccttt 300  
 tgctcctggt gaacaagccc aagggttatca ggaaatgttt acgaatttgg gtgagctctt 360  
 atgtacgata actgggattc gactctttct cattgcaacc taatgccggt gctgctggcg 420  
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<210> 4733  
 <211> 409  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-A12  
 <400> 4733

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 aagggtgggtg agatgggaga tgtatgggat gatgggtgtt acgaaaatgt tagaaaggta 120  
 tatgtagggc aagcacaata cggatatagcc ttcgtcaagt ttgagtatgt caatggttct 180  
 caantgggtt ttggagatga acatggnaag aagacagagc tangagttnn anagtttgag 240  
 attgatggg ntnactacat cntatacntg gaagggtacc gtnagaaaagt taacgatatg 300  
 acgtcagaaa tgatcacgtt tctttctant aagactttta aaggcaaaan ctctcatcct 360  
 atcganaaaa gacctgggggt ttantttgtg ccacatgggtg gnaaaatcg 409

<210> 4734  
 <211> 201  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-A2  
 <400> 4734

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 taatgtgggtc gattgggttg gttttgttat atattatgca tttgtatggg ggtcagtcga 120  
 tgtttgaact ttgtataata tttctttggg tctagtata aatattttcc cttnnnnnnn 180  
 nnnnnnnnnn nnnnnngggc g 201

<210> 4735  
 <211> 435  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-A4

<400> 4735

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 agctccgatac tgataggaac tgtgagtttc cttgagtctc cggagaaaga agtcgccgat 180  
 ttgctcctga taatcttagt ctcgaaatca aaacgatgtt ttgcgattgc ttctactgga 240  
 ataaagggttt ctccgagttg gaatcggaat cgtccgagtc aaagcccttc tcgcttccat 300  
 ctctctttcc tcaatggcca caaggcanag gttttgctac tgggaangat aagtcttgga 360  
 gaaatccaag tggtgaaagt caccgagttc gatagaattt gggaatgtgg naactccgcc 420  
 tgggaaaata agaat 435

<210> 4736  
 <211> 485  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-A6

<400> 4736

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 taattttcct gatcctaacc gtttccaaac cggtcgcctc tcaaaaactgt ggctgcgcct 180  
 ctgacttctg ttgcagcaaa tatggctact gtggtacgac cgatgagttc tgcggcgagg 240  
 gctgccagnc angaccttgc cggagcagtg gangcgggtg agatcctgct gtttcaacnan 300  
 aaggaacggt gacacctgac ttctttaact ctatactaaa ccaaagaggt gattgtcctg 360  
 gcaaaggatt ctacactcac gacaccttca tggccgcagc taattcttac cctancttcg 420  
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<210> 4737  
 <211> 404  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-A9  
  
 <400> 4737

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ccttcattgtt ccgttaccgt taacggctgt ttttttttaa tctccgtga ccgttctttt  120
tctgattcca ggtgttgcca gctgtttttt tttttgggag atattttttt taattccttt  180
taaagttagt tataagtcag ttttgtctgc ttggattttc atttataaaa caaggtggaa  240
ttaggtttct tccgatagag aaaggggctt gattttggac aaaggcacgt gtcttagtct  300
tttattcaag cttcgatcta taagttatga tttggggttg gttttgagtt ctccaatttt  360
agtcncanct ctgtggttgt tgtaactggg tttgtgatgg aacc                      404
  
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<210> 4738  
 <211> 440  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-B11  
  
 <400> 4738

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gattacaaa taaaaaggat caatttttct tacatgaaca ctctgttgta atggcagagg  180
agaatctaga actgagtctt ttatgtacag agagcaacgt tgatgatgag ggcatgattg  240
ttgacgaaac tccgattgaa atttcgattc ctcagatggg tttttctcaa tcggagagtg  300
aggagattat catggagatg gtggagaagg agaagcagca tttgccaagt gatgattaca  360
tcaagagact tagaagtgga gatttggatt tgaatgttgg aagaagagat gccctcaatt  420
ggatttggaa ngcttgtgaa                      440
  
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<210> 4739  
 <211> 449  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-B12  
  
 <400> 4739

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aatctcgagt attatggaga ttaatgttga tgaagaagct gggatcatca aagaagaaac  120
agttccactc ctggatgata aaaatcgaaa tcgggactta cctgacatag aaaggaacac  180
tatgatgcaa aaggcaatag gtaagacttt tcagacaaca gctaacttag ctaatctttt  240
acctacgggg acagttcttg cattccagat tttatcgcca atttgcacaa acgttggacg  300
ctgcgatcta actagcagat tcatgactgc gttgctagtt tccatctgcg gattctcttg  360
tttcatactt agcttcacag attcttacia ggatttgaat ggtagtgtct gctatggatt  420
tgcaacaatc caagggttct ggatnattg                                     449
  
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<210> 4740  
 <211> 392  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-B2  
  
 <400> 4740

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gtggtgcggg tgctggtggg ttctcgtacg agtatggggc tcgtgattca gggtttggag  120
tagttggggc tcagatgaga catgttcagg cccatggggc gagaccatcg gttaatgggt  180
tttcaagaga agtaggaact acttttgatg atggtttagg gttggatttg catctcagtc  240
ttgcacctgc tggnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn  300
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn  360
nnaattccag tgaaaaaaaa aaaaaaaaaa gg                                     392
  
```

<210> 4741  
 <211> 475

<212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-B5  
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 cacatctgan tctgtgaacg aaggacaccc tgacaagctt tgcgaccaga tctctgatgc 180  
 agtccttgat gctgccttg agcaagaacnc tgatagcatn nttgcttgtg anacatgcac 240  
 cangaccaac atgggtcatgg ttttcggtga gatcaccacc aaggctacga ttgactacga 300  
 gaagattgtc cgtgacactt gccgttccat tggattcatc tctgacgatg ttggctctga 360  
 tgctgacaaa tgcaaagtcc ttgttaacat tgaacaacag agcccagaca ttgctcaagg 420  
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<210> 4742  
 <211> 449  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-025-Q1-E1-B6  
 <400> 4742

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 tgccgcccga gaggtatcat agtctcncga agaaagatat cttcgtctgtg ctttctcgtc 180  
 caattccttt tgatgatgat aataaggaag tatggattga tanagttaca ggacgagttt 240  
 gstatggcgat ttctgctaga ggaatgtcta ttactggaat tgaagaccgg agatattgga 300  
 actggattcc aacggaagaa tctaggttcc atgttgtagc ctacttacag cagatttggt 360  
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<210> 4743  
 <211> 457

654163301463666666

<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-025-Q1-E1-B8  
  
<400> 4743

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tcaatgtggt aaccaaattg gtgccaaatt ttgggaagtc atctgtgatg aacatgggtgt 180  
agacccaact ggtacatata atggagattc agatcttcaa ttagaacgta ttaacgttta 240  
ttacaatgaa gcaactgggtg gacgttatgt tccccgtgct attttgatgg atttgggaacc 300  
tgggtactatg gactcagtc gtgccgggtcc attcgggtcaa atcttccgct ctgataactt 360  
tgtcttttga caatctgggg ctgggtaaca attgggctaa aggtcactac actgaagggtg 420  
ctgaacttat tgattcagta cttgatgttg tccgcaa 457

<210> 4744  
<211> 337  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> Clone ID: LIB22-025-Q1-E1-B9  
  
<400> 4744

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ccattaacca ccacagatta tccagcaatg ccagttgctt agagagcctt ttcgttttct 120  
ggttttaaacc ccaatgggga tggttctttt tttgggacag tactagtttt ctcatgttat 180  
tctaagttaa tacttaaagt tctggagggt gaattacatc aaggatatga atgtatgttt 240  
ttcgttatct tttgttttaa ttttatttat ctattaacga tttgtctttt ttttaattaga 300  
aaatttgtgt ttatcgaaaa aaaaaaaaaa aagggcg 337

<210> 4745  
<211> 458  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-025-Q1-E1-C11



<400> 4745

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ctctgtcaca atagtgtgat gatgcaatga gaatggagtt gatttcagtg attttcttct 180  
tcttttgctc tgttttgagt tctctgtctt taaactctga tgggttggtt ttgatgaagt 240  
ttaaatcttc tgttcttggt gatcctctgt ctttattaca gacatggaat tacaacacg 300  
aaagtccatg ttcttgacga ggaatctctt gtaataacga ttctaaagtc ttaactttgt 360  
ctcttcccaa ttctcagctt cttgggtcga ttcttctga tttgggttct ctcttaacac 420  
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<210> 4746

<211> 404

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-025-Q1-E1-C12

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gatggcatca aacggatctt tctctgtcga gagaaacgca aacgctagaa caacgatgaa 180  
gagaagaagc gacaatcgcg gttacggtgg cggaatcgga gggtatcaag aggagacgaa 240  
ccgttacgcg ccgccgcaaa aacgtttcag atcacaagcg caacagcaat tccgatctgg 300  
tcataatcct ctgtatcatc atcatggtag taataataat aacgtgtcta nggtttcttc 360  
tcaatcatat aacaattgcg gtgttgatgt gaatgcttca aatc 404

<210> 4747

<211> 452

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-025-Q1-E1-A10

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 cctactcatc gcatctacaa gcatgagtgt tgcctctcct tcgatactcc gagatccgaa 180  
 ggaggattgt tcgttgatat gaatagtttt cttgctttcg ggaaggatta tgtttcttgg 240  
 aactatgaga agactggaaa cctgttttat cttcatatta agcagactag gaagtctatt 300  
 cccgaggatc ggctctcaca gaaaccgact ctgctcgcta taggtgttga tggaggcttt 360  
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 aatctagtgg tagatctaaa ggctatggct ttgttacttt ttgtgatccg gaagcagctc 240  
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 ctgcttttgg tgttcagaga tccaaacctt cttctccnat tcatggacat gtaggaggaa 360  
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 cgataacagg aaacaaagat acagtcagta cttagtagtt tgagggnagc tacgggaagc 180  
 aagtaatact acataggggn gnnattccag tgcttaatga tgaaacatca tcagtacaag 240  
 caaacgtggt tttcatcata caccgtatca ctttcacaan tggctgcagt cattccgcaa 300  
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 ctatctcata acgataagtt gaattaatct ttgcgtctta gttcatcagt agagagagta 180  
 ggggtttttc cgcttatttt tagggaattt cattttgttg gaggtgagaa tctctattcg 240  
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 atcaaggggt agtttttagc taggttcact gatacttga agatctgagt tctttgggat 360  
 tctgttaagt ttgtggagat ctaaaagaca cgaaatttgt agaaatctgg ttgatatccc 420  
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 tt 482

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 ggtaacggat cnagccanat tctcgggacn tcnagttcta gctccggtec gttcatttcc 180  
 gtttctaggg ctttctcttc ctctccact cggatcaaag ctactctctt tcccgggtgat 240  
 gggatcggtc ccgaaatcgc ngaatctgtc aagcagggtg ttactgccgc tgatgtgggt 300  
 antgattggg acgaacagtt tgttggtact gaagtanatc ctanaaccaa tantttcttg 360  
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 <211> 422  
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 ttgttgctgg catttcggct acttttctca ttgtcctgat gattattggg catccgttcg 240  
 tccttctctt cgatccctat aggagaaaat tccaccactt cattgctaaa ctttgggctt 300  
 ccataagcat ttatccgttt tacaaaatca acatcgaagg gtttgagaaa tctgccatca 360  
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 aa 422

<210> 4753  
 <211> 423  
 <212> DNA  
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tgtcgggaaga tattgaaatc agaaaccggg aaaaatgact tcgtttctta gtttctccgc  180
catttcagct catccaccta ctttttccgg cgcttcattt cgtcctcgct ctttctctcc  240
ccgattgttc aagtcttgtg ttaagtgcac ttatgctgaa gctggattaa gcagcgcttc  300
atggtcagcc cctattgaca ttgtggcaga tgtcaaatcc gaaagggttg tagttcttgg  360
tggaatggg tcgttggctc agctatctgc aaagcancaa tctccaatgg gttaaanttt  420
ttg                                                                    423

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<223>      unsure at all n locations
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<212>      DNA
<213>      Arabidopsis thaliana

<223>      unsure at all n locations
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<400>      4755

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gaggattgca gggataaaag tctgggtctt gactggtgac aaccaagaaa ctgccatatt  180
cattggcttc tcatnaggc ttctgacaag aaacatgagg caaattgtaa taaatagcaa  240
ctcgttggat tcatgtccga aggagcttan aagaagcaaa tgccaatatt gcaagtaatg  300

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acgaaaagtg ataatgtggg ccttgattaa tgacggtacc aanctcatat atgtactcca 360  
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 acgggaaagg angttgggg ttccttcaag attcaatttc gtaactcaag cgggtcacan 180  
 gaaacgccgc tttaaattgc tggctaactn ctncgggttt tcaatcctng ggangctncc 240  
 tctctcttcc aacttcctc cnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnttggg gtaataaacn ggtcctcaac 360  
 ggtgaatggg attnggtca aaaaatcaac aatccggact cctttctccc ttcaagtttc 420  
 atccggttgg ctaagtcctt tccntncta actaaaacga aagatttgaa gccttgatcc 480  
 cttcngaga aaactc 496

<210> 4757  
 <211> 488  
 <212> DNA  
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 tccaattcaa tggctcttcc gttgccattg atcttcttta tcttctctca ttgttcgtt 180  
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ggacttttat caaacgccgg agttccacca cttccgacga cgggattcgt tctccaaaaa 300  
 ggcaagaac gaacaatcag cgctccaact tcatggggag gaagattctg ggggagaact 360  
 caatgttcca ncgacancga cggaaaantc acttgtctca acgnggattg cggatttggt 420  
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<210> 4758  
 <211> 494  
 <212> DNA  
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 aactcgtttg ctaacaaaa caacacgac cctgggaatc ctaatgctga cccgccaaca 240  
 tggactctta aaattattgg taggatactg gaagatgggg tggatcccga ccagccaggg 300  
 tttgttcaga aagcaaacc attgcatccc aaattctcgt ctttcttcaa aagggttaca 360  
 gtttccttg atcagaggct gtatcctgag aaccattga tcatatggga gaatgctcga 420  
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gacccaaagg acacgtttgt gtcgatgtgg acttttgctc acaaggagag atcacaacaa 180  
ggaccagtgg ttagcattga ggaagctttt gataagtact gtcaagggtt atcagcttac 240  
ggtccttatc ttgatcatgt tttaggggtat tggaaagctt accaagcaaa cccggatcag 300  
attttgtttc tcaagtatga gacaatgaga gctgatccat tgccttatgt gaagagatta 360  
gctgagttat gggttatggg ttcacgaaag gaggaagaag aaggaaatgt tgttgagaaa 420  
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g 481

<210> 4760  
<211> 426  
<212> DNA  
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tgacggtcgc ctcatcattg acttcacggg tacttctctt tatttatgtg taaattgact 180  
gttttggcgc agttttgtta gggttaaattt acataaaagc attctaattt tgtgtgttct 240  
gttcaactgaa ttcttaggtt tcttatgtca aatctttctc tgtttttcta ttttcttgaa 300  
cagcaagtta acattgtgaa acctcaagtg atgctccaaa tttggttttc ctttgcagct 360  
gaaattttgg gggcttcctt aangtgctc ctaacttcgg atcaacaaat gggaaaaaaa 420  
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<212> DNA  
<213> Arabidopsis thaliana  
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aagaaaacct aactcaattc gcggcggaga tgaaaattcg tttccagatt gagtttgtgc 180  
tgatgaagac ttttgagatg ttatctttca aagcgattag gtttgttgag gaggagctta 240  
catcggaact ccttcaccgt ttctcggcaa aaaaactcaa acctttctct ctaacttcac 300  
cgattttgag ttttaaacca acggttaagc tcaattccag ttgtcgcgct caattgatcg 360  
atacggttca caatctcttc atcggagttg gagttggact tccatgtacg ggtaatggat 420  
gtggtgataa gata 434

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gttgaggagc tctggtggaa gactctggat gctgcagctt taaatttgag ctcatgcgcc 240  
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gctgctaagg ttggaaaagg attgtcaaaa gatgaaaaag ctcaaaagtt agctcttcag 360  
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aa 422

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<212> DNA  
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acatcatgaa gagaagaaag aggctattga tcaaattgta atggctgact ttggcggtacc 180  
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 gataaagctc atcttttttcg gttgtagaga agaaacaatg tttcaaagac acaacatttg 360  
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 gaggccttca tacagaaacg ttttacttgc ggtgagaaat aatttgaata ttccctgctc 360  
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 <223> Clone ID: LIB22-023-Q1-E1-D2

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aagatcgtgg tgattttggc cggagacaat aaacctactt gcttggctgt tccggctcgtg 300  
gttcctccac ccacttccat ttttcgttgt aactgtgaca atgttactgt catctcaacc 360  
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<223> unsure at all n locations  
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ctcgtttgtg ttaacaaagc tcaatcggag ctttcttcgc atcagaggaa gatctttaa 240  
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<212> DNA  
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<223> unsure at all n locations  
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acaggtccac atgtcgagcc gccaacgtgg catacccaaa aactgaagcc gagcttgtct 240  
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<210> 4768  
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 <212> DNA  
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 <223> Clone ID: LIB22-023-Q1-E1-E4  
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 cccaagaaat catcaagaag caccaacaga ttcagcttct cttataggaa ccctagaatc 240  
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 gaccaatct ctctcccttt ctcacgttac ccttgttcaa cgaccaaca accactaagc 360  
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<210> 4769  
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gagatgatgc ttctagttag gtagttcatg agtctgagga gaagactagt gtagtcggaga 240  
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tcaagagtgt ttgcctaac acaacagata atggggaaag cagtagtgat gagaagagta 360  
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<210> 4770  
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<213> Arabidopsis thaliana  
<223> Clone ID: LIB22-023-Q1-E1-F11  
<400> 4770

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aaggatcatca cttgtctcgt cggcgctcgca tttcaagaag aggacacagt caacacagtt 180  
ctcgatcaac ctttttgacc ggagaccaag aaaaacaaaa tccggcgctcg ttgcagccat 240  
cagcgaggat ttgggtcaaaa cgctgcgttt ttccacaacg accggagaca gaaagagcga 300  
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<210> 4771  
<211> 426  
<212> DNA  
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acaaggaaa caccaggaaa tcgataacc acgttggggt tcaggaatct atggctccgg 240

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<210> 4772  
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 ggacactttg tgcttggctc ctcaattgct cttcttggtc tttggcatct cttcaacacc 120  
 ataagatctt actgtcttaa aggccttgaa gctttctctg caaaattctg gttccctttc 180  
 cctaaactca aacatcttga gcttatcttg attctcttct tctccttctt ctccatcact 240  
 ctctcaccct tagatttccc taatttcaac ttctcctctc tcaaaccaga caacctagaa 300  
 catgcttcca tgttcttcca cctcattatc tttgcgtggt tcgctctctt ctgcgaacta 360  
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 agaactcttc cttctcant ttcaatccac 450

<210> 4773  
 <211> 484  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 <400> 4773

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 caccgtcaga ttctgatgta agtattatca aagctcaaga acaatcacat catcagaatc 180  
 taacttatat atcaaaggtc cagaattttc tccattgaag ctggattcta aggaaagtta 240

tcaaaagttt tgagagcttt ggatagtga gctcaaagaa ctaaacaatg ggcttcagag 300  
 tttgtgttat tgtegtcttc ttgggttgte ttcttctagt ccctgagaaa acaatggctc 360  
 aagaaatgaa acgtgcatcg atcgttatcc aaggagctcg acgagtttgt gagaccgatg 420  
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 gtcc 484

<210> 4774  
 <211> 431  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-023-Q1-E1-G12

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 gcttctcttg agcgtgatc atcactgggt ttgcattttt tcttgggtggg tattcttcaa 180  
 attgttcaaa gtcctgacct tttcttctt agaatctgat tactggaatc ttgaagctgg 240  
 agagactcga gtttatatgg tttcaagcat cgttgagtca gagggatgat gtgaaagtgc 300  
 tagagaatgt gaatatggt gtagataata acaattacaa gacgcagatt gagtttgctg 360  
 gatnatcagt tgctgcttct tcgaatccat ctacaaacac tcagcaagaa aaatcagaat 420  
 cttgtacaga g 431

<210> 4775  
 <211> 454  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-023-Q1-E1-G2

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 agggaaatgc ccacctgct ggtccacatg ttcggatacc atttgcttca ctatttgata 180

ctctcggcat gtttttagct gatgagggcg ccgtcttgct cctctactca ttgttgcaag 240  
 ggaattccga ctttaaggag tatgtgttgg tgcgaactga tttggatact ttgttgatgc 300  
 ccatcctgga gacgctgtat aacgcttcaa agagaacatc atctaataca atatacatga 360  
 tgctaattgt acttctcata ctttagtcagg attcatcctt caattcaagc attcacaaga 420  
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<210> 4776  
 <211> 450  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-023-Q1-E1-G3

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 caaatgggtg ttggttctgg taatgagtgt gtaggagttc ccggtacata cttccctttg 180  
 aggaaaggcg gtagggttac tctgtatcag gatgctcatg ttgatgacgg tactcttccg 240  
 agtgtagatc ttgatggtgg gattcagtat agacatggaa agtgctggga ggatatggct 300  
 gatgcaataa ggcaggcaag aagggttgatt tatatcacag gttggtcagt tttccatccg 360  
 gttangctgg ttcgtcgtac caatgatccc accgaaggta cattaaggga gttgcttaaa 420  
 gtcaaattctc aagaangtgt taaaatgttg 450

<210> 4777  
 <211> 429  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-023-Q1-E1-D10

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 tcttcggatg tttatttgcg ttgtcctctg caatagaaga ggctacgaag ttaggatcag 180



tgatagggat agatcttggg actacttact cttgtgttgg tgtttacaag aatgggtcatg 240  
 tcgaaattat tgccaatgac caaggaaacc gtattacacc ttcattgggtt ggttttactg 300  
 actctgaaag actcattggg gaggtctgta agaatacaag agctgttaat ncagaganga 360  
 ctgtcttcga cgtaaagaga ttgatcgggg cgaaaatttg aggatnagga gggtcaaaaa 420  
 gggatagga 429

<210> 4778  
 <211> 449  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-022-Q1-E1-H10

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 ctgcgcgtta agatggcgcc ggcgacggag catcagagct cgttcttgag tcgactaagc 180  
 cgtcgcaatc aagtgggttc caaggagggtt aaccacgagc aagagcaaag aagaactcga 240  
 agattttcaa aaacacgtag ctgaacgttt cgcggagctc ttacaacgtc ggattcgccg 300  
 gaatcttacc cgatcttcga ttcattggta aggaanttct tgagtttcag tcaaagaatc 360  
 gnggttcacg gttttaaaac gaatcggtcc aattcgaaac cccgttgga anttgtccgg 420  
 aatgctgatg ggtgtaagcc tgaattgtc 449

<210> 4779  
 <211> 428  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-022-Q1-E1-H11

<400> 4779  
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 ccctgtcttc gccgttcatt cgactgaccc caagaaatct acccaatcag cctccgcttc 180

ggtaaattgg agtctagaga gttggaagtc gaagaaagct ttgcaattgc cggattatcc 240  
 tgatcagaag gatgttgatt cggttctaca gacgctttct tcttttcctc ctaaagtttt 300  
 cgctggtgag gctaggaaac tagaaggata agcttggcaa ancggcnatg ggtcaagcct 360  
 taangcttna aggnnggtaat tgtgctaaaa gtttcangga atttaaggca ataacattag 420  
 ggancctt 428

<210> 4780  
 <211> 484  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-022-Q1-E1-H12

<400> 4780  
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 caaagagcat cttgatggan tgcgtgctgg tggtgaaaaa gtgtacaacg tgtttgataa 180  
 ccagcttcct gcggctctga agagactcca atttgacaag cagctagcga tggacaacat 240  
 ccggaagctg gtcactgagg ctgatgggta ccagcctcac ttgattgcnc ctgagcaagg 300  
 ttaccgtcgt ctcatagagt cttcnattgt ccccatcaaa ggccctgctg aagcatctgt 360  
 tgacaccgtt caangctatc ctaaaggatt cnggntcana antccngaa attaaancgg 420  
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 aant 484

<210> 4781  
 <211> 430  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-022-Q1-E1-H5

<400> 4781  
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gaactgctat cactatcagt gctgacccaa gtttaggttc atgccacttt ccactacaa 180  
gcacgagtga atcgatattg aacgtaacaa gtgaagatgg attagggctt ttcgggagaa 240  
taccatctca tccaactccc aagcctgaag cttcaacctc ctctcaaga actttgatct 300  
catttctcta cttcctttgc ttttgtgttt tatatccact tgttataacc ttaacatagt 360  
catgtaatat ataataggca actttttcta ggctaattca agacgataag ttttttcaaa 420  
aaanggttac 430

<210> 4782  
<211> 451  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-022-Q1-E1-H6  
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aaccggggtt gtctacaatg gcttcgagca agcagatctt tttattgatg ggatcgccaa 180  
aatactacct gatgggcttt tgcagttgac aaatactaca gagttgcaaa tgggtcatgc 240  
tttcttcaag aagccgtttg attttgatcc atcttcatca ctatcgttct atacacattt 300  
tgtgtgtgcg cttgtgcctc ctaagttggg agctgatggg ggccatggga ttgtctttgt 360  
tgtatctcct tccattgatc tctctcatgc atacgcaact cagtacttgg gggctcctcaa 420  
caacttaaca aatggggact cctctcanat c 451

<210> 4783  
<211> 443  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-022-Q1-E1-H7  
<400> 4783

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gacaggttga ggagtattgc tggtaggatt cagacagtgg taggtgatct agcaactcaa 180  
 ggagaaaggc ttcagtctct gctaagctgg cgtgatccgc gtgcaacagc gctcttcgtc 240  
 ttgttctgct tgattgccgc agtcattctc tatgtgacac ctttccaggt tgtggctctt 300  
 tgtattggga tctatggcct gagacatccg anggtcagat acaaactacc aatcccgttc 360  
 ctctcaatct cctcaagaaa ggcttctgc aagaaactga ttggatgctc tgacctgcaa 420  
 aaaactgctt ccaataccga nga 443

<210> 4784  
 <211> 427  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> Clone ID: LIB22-023-Q1-E1-A11

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 gacgcaatta actcctatct tcaacagggt cttagttatg ggaggaagag gaaagtgatt 180  
 ctagaagcac cactctacga taaagattgt gttttgggca gcatttttagc tgctcatttc 240  
 ctttcttcat ctgaccttc tagagctaata tctatgttg aagctgcggc atctaatactc 300  
 gaacaatcta caccttatga gaaagcgggt tacgaggctg ttacttacct aatctctgag 360  
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 gacttgg 427

<210> 4785  
 <211> 439  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-023-Q1-E1-A9

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agtggactct tcttagagta agatgggagg tgtgacttct tcaatggcgg cgaagttggc 180  
 gtttttttcc cgaatccgc cgtcgtacaa gctgggtcaga gatgaaacaa cggagctttt 240  
 tctaatagagc ccttttcccc atcgagaaaa tgtcgacatt ttgcggctgc ccacgcgccg 300  
 aggcaccgaa atcgtggcca tgtacatcag atacccaatg gccgtcacca cccttctcta 360  
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<210> 4786  
 <211> 446  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 gttgtgattg agcaaagttg ggggtgctcct aaagtgcaca aagatgggtg tactgttgcc 240  
 aaaagtattg agttcaaaga caaaattaag aacgttggtg ctaatcttgt gaagcangtt 300  
 gcaaatagcta ctaatgatgt tgctggtgat ggtactactt gtgctactgt cctcaccg 360  
 gctatatattg cccaaaggat gcaaaatcag ttgccgcaag aatgaatgca atgggacttg 420  
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<210> 4787  
 <211> 429  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-023-Q1-E1-B9

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tacaactctt tctcaagtg tttctccgac aagacgaaat ctccacaatc ccaaatact 180  
gacaatgtct tctctcagac aaacctgtct ttctctccg ttcttcgtgc ttacatccgc 240  
aatgcgaggt tcaacacttc ctctactctt aaaccacca tcataatcac tctcgtctcc 300  
gagagccacg tcagcgccgc cgtcacttgc tcaaaaaccc taaatttctt cctcaaaatc 360  
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ctcgacatg 429

<210> 4788  
<211> 441  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<210> 4789  
<211> 503  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-023-Q1-E1-C11  
<400> 4789

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ggggtgtcat ctcttgcta tgatgaagct ggagtcaaga gtaagattcg ggaacttgag 180  
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 gggaagtcgt ggaactggga tgaacttttg gctttgactc cacagttgga cttgaaagag 300  
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 cttgatgtct tggacacagat ggtgtcagtc tcaggcagtc cgatccaacg gctaggcact 420  
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<210> 4790  
 <211> 453  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-023-Q1-E1-C5  
 <400> 4790

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 catgcagctc cacgcgttac cctgagctct gtatctctgc cgtggtaact gncggcggcg 240  
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 tggagcacia ttacttcacc gtgaagaagc tgatcaagaa gagganagga ctgacgccgc 360  
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<210> 4791  
 <211> 449  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-023-Q1-E1-D1  
 <400> 4791

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cgaccatcaa caggттаага agaaacgagg tagacctagg aagtannnnn nnnnnnnnnn 180  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnn nctctactt cgcctcttcc 240  
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nnnnnnnnnn aactcttccg atccacctgc taaacggaac agaggacgtc ctctgggctc 360  
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<210> 4792  
<211> 481  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-022-Q1-E1-H1  
<400> 4792

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acggtggcta agaattgctca tcgaagagct tcaactggagc ttcttcttcg gtgtgattat 180  
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cttcaaagac gagcagaaga tacaaccctc tcaagctcag atttacgttg gtttgattca 300  
gattccttgg attattaaac ctctccgggg aatgggtgac tgatgttgtc ccaagttttg 360  
ggttacaagg agacgaaccc tatttcaaat taanccggtt tttctgcta tgattctcca 420  
atgatgggtg ttatgggctt cacaacgnat cctgcatcct tgcaactggg cnttgtccct 480  
g 481

<210> 4793  
<211> 489  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-022-Q1-E1-F11  
<400> 4793



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aagcctaaat ccgttaacct cgtcacggct gtacacgcgg ctgagccagc tagaaacgct 240  
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gagaagctgg gaaactgaag aaaggntcct ggcaaacttt ctggattaac cctaaaggcc 360  
aattgaagcc ttgaagtctt ggtggcctaa aaaacgaata agaagggctt tttcctcccg 420  
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<210> 4794  
<211> 457  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-022-Q1-E1-F2  
<400> 4794

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tcgtttctct caacaaggct tacgaagccg ttggtactca cttctcgac cgtcttttcc 240  
gtactggtag tggcantggc gatgggggtg ataatcgtga tgtgtatctg canatatcta 300  
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tccagaattc cccttattct ccaanntaat gtccaaagga ataactacaa aacatgctcc 420  
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<210> 4795  
<211> 459  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 4795

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taggattggg gaagagagat tgagagtctc aagggtgtgag agttttcttg agatttttgt 180

tagagaagga tgtgagatgg tggagatgag tgttactgat catgataagt ttgctgctga 240

atcacagttt ataactcata ctcttggtag gcttttgggg atggtgaagt tgatatcgac 300

gccgattaat acgaaagggc acgagggcgt gcttgattta gctgagaata tttgtgggga 360

tagttttgat ttgtattatg gggtgtttgt gtataataac aactctttgg aggtgttaga 420

gaagattgat ttggcttcga ngcttgcgta aggaccttt 459

<210> 4796

<211> 466

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-022-Q1-E1-F6

<400> 4796

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ttgagtggtc atgtctgctc ctatctattc tccgatagat atgcaagaga ttgttcaaaa 120

tcctcctggg tttgatacgg aaccagtccc aatcagtact taccgagaca atgaacctgt 180

cccgttttca acttaccgag aaaatgattc agatcatctc gacgccactc agcaagagaa 240

cgatgacttt tgggaaaacg gtttcagtag ggaagaggcc attgaagatc cagagccttc 300

tcaggcaaag gaaaatggaa agagaagtgt agacaacagc gctttcactc atggggaaac 360

tgatctcaat caacttcctg cgattcctcc gggttcaact gggtaaggt ttgccgtatg 420

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<210> 4797

<211> 464

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-022-Q1-E1-F8



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 gaggagatca cagatcttct tttcatatga agagatcttt ctttctcttg tatgtgctcc 180  
 tgggtacaggc cttctatggg gcttgggtgta ntgttgagga aagcctgcat tgtgaatatt 240  
 ccaatttagc gagtcttcac cggcctcaca gcgtatcgat tacagagttt ggancgggtg 300  
 ganatgggtg gactctaaac actaaagcct ttcanaatgc tctgttctac ctcaattcct 360  
 ttctccgaan aaaggggggg ggccaaacct tttgttccc gcctgggcca antgggctta 420  
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<210> 4800  
 <211> 437  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-022-Q1-E1-G2  
 <400> 4800

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 aaattcgaga gctatttttg tgggaaaatc gctgttgatg ctagcatgag catttaccaa 180  
 ttcttcattg ttgttggag aactgggact gaaatgctca ctaatgaagc tggatgaagtc 240  
 actagtcatt tacaagggat gtttaaatcga acgattcgctc ttcttgaagc tggaattaag 300  
 cctgtctatg ttttcgatgg gaagcccccg gagttaaaga gacaggaact ggctaaacgt 360  
 tactccaaga gagctgatgc aactgcagat ttgactgggt gcaattgang caagaaacaa 420  
 aggaagacan ttgagaa 437

<210> 4801  
 <211> 468  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-022-Q1-E1-G3

<400> 4801

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tttcaatttc tcttgtaaaa ccctaaatta tgtacagcaa tttcaaggaa caagcgatcg 180

agtacgtgaa gcaagcgggt catgaagaca atgctgggaa ttacaataaa gctttccctc 240

tatacatgaa cgcgcttgag tacttcaaaa ctcatctcaa gtatgagaag aaccctaaga 300

tcagagaagc tattaccag aaattcaccg agtatctccg tcgtgctgag gagatccgtg 360

ctgttctcga tgaaggtgga tnggggtccag gatctaacgg tgatgcaacc gtcgcaacga 420

aggccaaaac taagcctaaa ggatggagaa agtgggtgga aagaaggg 468

<210> 4802

<211> 459

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-022-Q1-E1-G5

<400> 4802

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aacaatggcc aaaaccagag ggtcttggtg tctcgtcaac gctctaactg ctatagcttt 120

tttggcgaca gccatttgt gtgaagctgg cttgtctcag aaagaacagg acaaggcttc 180

gaaattgcct ggtcagaatt ttaatgttag ttttgctcac tactctgggt ttgttgctac 240

taatgagcaa ttgggaagag ctctctttta ctggttattt gaagccgttg aagatgctaa 300

gtctaagcct cttgttctct ggctcaatgg aggaccagga tgttcatctg ttgcatatgg 360

tgaagcagaa gagataggac catttcacat taaggcagat gggaagactc cttaccttaa 420

tcaatattcc tgggnaccaa agctgnaaat aatttggtc 459

<210> 4803

<211> 455

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-022-Q1-E1-G6

<400> 4803

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gattgggcag tgaagatgca acactttccc aatggtaaga gtactcttta caatttttag 120

atttgtgttg tcacacatat tgaaatatat atatggtata tttggacgaa aaaaaaaaaa 180

aaagggcggc cgctctagag gatccaagct tacgtacgcg tgcattgcgac gtcattagctc 240

ttctatagtg tcacctaaat tcaattcact ggccgtcggt ttacaacgct ntgactggga 300

aaacctggcg ttaccaact taatgcctt gcagcacatc cccctttcgc caactggcgt 360

aatagcgaag aggcccgcaa ccgatngccc ttcccaacan ttgcgcaanc ctgaatgggc 420

naaatgggaa ncngccctgg taaccggngc aatta 455

<210> 4804

<211> 413

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-022-Q1-E1-G7

<400> 4804

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cgccgtgatt cttggttttg gtgctttctt tgccgtcttc acatcttttt tggatatggtt 180

agaaaaacga tatgtgggag ctcgtcatat atcggaatgg ttcaatacag cgggaagaaa 240

cgtaaagaca ggacttattg caagtgtcat tgtatcacag tggacatggg ctgcgaccat 300

actgcanagt tcaaacgtag catggcagta tggggtagt gggaccgttt tgggtacgct 360

agtggagcca ccatacaagt gctgttgttt ggtgtgatgg cgantgagat aaa 413

<210> 4805

<211> 398

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-022-Q1-E1-G8

<400> 4805

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ggaagtaaga gaagaaatct tcatgatgaa acagatcaaa atgttattgc ttcagaagac 180  
actgtatacc gctacttggtg tcccgtgaaa aagaccggga gcattatcgg gaaaggcggc 240  
gagattgcta agcagataag gtctgagact aaatcaaaca tgaggataaa cgaggcttta 300  
cctgggttgt gaaggagcgt gttgttacca tgtanttcca ctaactgagg agttgaatca 360  
ttttgggaga tgatggtgaa ccttgtntgt cccgcctt 398

<210> 4806  
<211> 473  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-022-Q1-E1-G9  
<400> 4806

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aggaatctga acaggaaaca agaatggncg tggtcgattg gcttgggttg ggattaggct 180  
ctgttgctgg agctttggtc tcggaaggtc tgaaagtttt gatttcagag gcaaagaagg 240  
tgttagcttt caaatctgtg tctaacgagc tcgcatcgac gatggagtca ttgcttccgg 300  
tgatcaaaga gatcgaatcg atgcaagatg gtatggaact acaagatctt aaaagacacg 360  
atcgataaag ctcttttact ggttgagaaa tgttcacatg tcgagaantg gatataatcc 420  
tgaaatccga agtacaccag aaaaantnag ggaatcaata ggaagatgcn cca 473

<210> 4807  
<211> 456  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-022-Q1-E1-E9  
<400> 4807

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 cgggattctc cgagttcttg gtgaagccag tgatgactga cgtcaccgtc gccgcggttt 180  
 gctccggcct aaacgaaaca tgttctctcg ccgtctatct caccggagta gaacaagtga 240  
 cggtaggact ggggacaatg gtaatgatgc cggtgatcgg gaatctatcc gatagatatg 300  
 ggaatcaaaa cattactcac tctccgatg gtgcctctc caatcctct ccaaacgata 360  
 attancgtta tanaaaggga tacgaaattc ctccnagc gttttacaat aaccaagat 420  
 tccaatcnga naatggcccg gccaaaggga ccgtn 456

<210> 4808  
 <211> 454  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-021-Q1-E1-C12  
 <400> 4808

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 agccttttgc atgggaaagc aaagaatttt tgaggaaact ttgcatagga aaggaggttg 180  
 cattcaaagt ggattacaag gtggaagcta ttgctggaag agaatttggc tctgttttcc 240  
 ttggcaacga gaatcttgct aagcttggtg ttaaaactgg ttgggcaaag gtaggggagc 300  
 caggtcagca gaatcaggac aaggttagtc cttacattaa agagttgcta cagcttgaag 360  
 agctggccaa gcaggaagga tatggctggt ggagcaaggt tcctgggtgct gctgaagcat 420  
 ctatcagaaa tctcctcct tctgcaatgg ggaa 454

<210> 4809  
 <211> 495  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-021-Q1-E1-C2  
 <400> 4809

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acagaatttc accttctcct gctgctaaac atgaggctga agaggcgatg tcagttaagc 180  
gtaggcaaag aacacctcct actttgccaa gaagaacgtc tttgatagcg caccagtcga 240  
gacaactagg agcagatatt tcaaatatgg cagcaaagga aaccgcgaag ctacatccat 300  
ctgtgccatc agagtctgaa actaattctc atcaatctcg tgttcatgct tctcctgtga 360  
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caccccatat attga 495

<210> 4810  
<211> 455  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-021-Q1-E1-C5  
<400> 4810

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accactccca atttctccat ctctctctca attctctctt tctctttctc ctttatcaaa 120  
aacgcagcga ttcattcctc caagccaggg ctctcgtcta cggactttgt gtaccaaagt 180  
catcatacca aacatgcaag attcaggatc accaccactc tcttatctta ctacgcgaga 240  
agccgctgag attgatgaga ccttgatggg tctctttggt ttctccattg atcagctcat 300  
ggaattggct ggtcttagtg tggcagcttc aattgctgag gtttataaac cggaagaata 360  
tagccgggtt ctagctatct gtggctcctg gaacaatggg ggtgatgggt tgggtggcgc 420  
gaagcatttg cancactttg ggatataaac cgttt 455

<210> 4811  
<211> 505  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-021-Q1-E1-C6  
<400> 4811

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gacgacgaag tcgagagaaa gaaataatgg cggaggagac gatggagAAC gaagagaggg 120  
tgaagctggt cgtcggacaa gttccgaagc acatgacgga gattcagctc ctcacattgt 180  
ttcgagaatt ctccatcgtc aatgaagtca acatcattaa agagaagaca acacgagctc 240  
ctcgaggatg ttgttttctg acatgtccta caagggaaga tgctgacaag gtgatcaata 300  
gttttcataa caagaagaca ttgcctgggg catctagtcc gttgcaagtt aagtatgcan 360  
atggcgagtt ggaaagacta gatgttcttg actgttcgtg caatccagag cacaaacttt 420  
tccgtccngt aaggcttcca aangaatgtc tctgaaacct gaagtccagt ccctantcc 480  
tctgaatacg ggaccattaa gggtt 505

<210> 4812  
<211> 518  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-021-Q1-E1-C7  
  
<400> 4812

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tcgaatctct ggttttgagt tttggagaat ggtgtttttc cgcagcgtat cggcctttac 180  
taggctgagg tctcgctcg gccacaatc ttactcagc aattctgtca gatggattca 240  
gatgcagagc tctaccgacc tggacctgaa gtcgcagctg caagagttaa ttccggaaca 300  
gcaggaccgt ctgaagaaac tgaagtcaga acatgggaag gtccaactgg gaaacatcac 360  
tgttgatatg gttattngt ggaatgagan ggatgactgg attgctttgg gaaaanctca 420  
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agaaagtatt acctactgcc caatctggaa ctgaaacc 518

<210> 4813  
<211> 488  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-021-Q1-E1-C8

<400> 4813

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cgtattctcc ctctctccgt cgcttcctct cctaaaacca cgctcggtct ctctccgcca 180  
ccatcccata accaccgccg cttcttcaag cgatctaaac gtttctccaa atgttgtctc 240  
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cgctactgca gttcctgaaa gtgctgaaga aggtgataac agtggtaaat tgacgaangg 420  
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ctaacaaa 488

<210> 4814

<211> 456

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-021-Q1-E1-D10

<400> 4814

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tcaaacgccg ttttgctct ttggtggtcg gtttcggccg gcaccgtgag agggcctctc 180  
ttctcttttt agtttttttt ttcttttggt tctgattttt ttagccggcg gcggctctc 240  
cttctttgtg gcttaatcaa tgagttttaa gtcgacggcg agcgggnata gttctctcag 300  
atggagggtc gttggtagat ctacantggg gaactatgac tctcgacgac ggcaagcaga 360  
tctggtgat tttctgtca gtctctcgc ggaggtatct ctctccgat gaacctctt 420  
ggtagtggtg gctcagtgtt aaganggtac agaggt 456

<210> 4815

<211> 458

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-021-Q1-E1-D11

<400> 4815

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ggaaggacat gactaaggat acaacatttg agtttgagaa gaagagaaac agacctgaga 180  
gatacgacag gaacgttaca gagaatacac tcatggccat taagaagatt gctaagatca 240  
gaaccgcaag ggaagccaaa catatcgaaa ataggttgaa gccaaacaag cagaagaaac 300  
tcaatgacga tatgaaagaa cttgatcaga acattcatat ggtccaggct cccggggcac 360  
agaagatcaa agttgatgtt tccgaaaaga agtctgttca aaacgaagcc atggaagagt 420  
gattctgtgg taacaatatg atccgtctaa aagcctct 458

<210> 4816

<211> 362

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-021-Q1-E1-D12

<400> 4816

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aataattcgt ggttgggtgca gactgggtcaa tgagcagtga ttgtcaaagg atttgactg 180  
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ttgttattaa tacagaacat tttttaggaa tttggattgg tgatataaat gtaaataana 300  
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cg 362

<210> 4817

<211> 501

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-021-Q1-E1-D2

<400> 4817

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tccggtttaa cggnacgggt aaagctgcta ccanccttcc tcaagtcac tcgaccgctg 240
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gagtgtacaa cgcaaggcaa gcgaatggaa tgacattttg ggcaccaa anattaacatat 360
ttaggagatt caccggtggg gaaaaaggca atnanactcc ccggcggaagg attcgattan 420
taaccggnac ttacnnggg gnntaagtta taggactaca aggtgacnct tttgacgtcc 480
ggnaaacact cccaatcat c 501
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<210> 4818  
<211> 495  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-021-Q1-E1-D3

<400> 4818

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attacaaaga agctctctcc aagtcattgc tcttcttcca aggtcagcga tctggtctctc 180
ttcctagagg ccaacaaatt tcttgagggg ctagctctgg cctttccgat ggctctgctg 240
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caatggcggt taccaccaca atgctctcat ggagcgcact ggaatacggg aaacggatgg 360
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tgtgccagag ccacgccggg gaagctttat gtcggtgtag gagattctaa tgttgatnac 480
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<210> 4819

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506

<210> 4821  
<211> 408  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> Clone ID: LIB22-021-Q1-E1-C11  
  
<400> 4821

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acaatatccc caataagcgc cggaacagc tccgtgagca gttcatgcga cgaactcgtc 300  
tcgttcttaa agaatcggag catgagccat ggtgcaagaa gtacatggaa ttgtataatg 360  
aggttagaga aaactgggag aggctttatt gggatgaagg atattcta 408

<210> 4822  
<211> 479  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-020-Q1-E1-H5  
  
<400> 4822

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tacgaaagag cggtttgagt ttcagaagaa gagtgtgagg aaagaaagga tcaatgttag 180  
gttttatagc ttgaaggcta aggcacaang atcgtaatt gaagggatta gtgtgtgaca 240  
agagaaagag cttaacaaca aaaccgatta tggaagttgt tgggggttca tcatgtccgt 300  
ctgctctgag agaantana acggtcactc cgaagtttta acaagnacat ttanggcct 360  
tgaanatnaa cggaagcaaa ggctcancga caangcttcc atatanangg agcntggnta 420  
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<210> 4823  
 <211> 463  
 <212> DNA  
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 atgtctgtat ctgtagcagc agagcatgat tacatagggt tgtcagagtt tccaaccatg 180  
 gaagcaacaa caatgtctga caaaaccaa accagagaca ataacaacgg tctcaatttc 240  
 aaggctaccg agttaagact cggtttacct ggttctgagt cgccggagcg aagtcgactc 300  
 aagattcttg gctctcaaca agagtactgt cccgtgtcag gtgccaaaaa ggtgttctcc 360  
 gacgcattaa ccgactctaa caaatgggtc ctncctctg gattcaatac tgncnactgg 420  
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 <211> 393  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> Clone ID: LIB22-021-Q1-E1-A10

<400> 4824  
  
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 gttttctttc tctaaccatg agattgagaa cggtgtgtgg aaaagtaacc ttttcttggg 180  
 aaatttcgtg gaagatcttt ctctgcaac atcagggtct gcaattacca gcgagggttt 240  
 atctgcacct gctgctgttg agaattccga aactgcagat tcgtatttct cgtctttgga 300  
 caatattatc gatttcggac aggattggtt gtggtcgtag ctttgaataa ttgatttggt 360  
 gaatgtaatg tctctctctt aatggcagta att 393

<210> 4825  
 <211> 465  
 <212> DNA



<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-021-Q1-E1-A12

<400> 4825

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anttggttcg atgcttcana ttgcanangc tgattccctc nacgagagta cacgtcatct  180
tgcgattgag tttttgggta ctctggctna ggcgcgtnan cgtgcccttg cnatggtcag  240
gaagcttcct caagtttatt gacaggttgt ttgctgttct tatgaagatg ctcgaggata  300
ttgaggacta tcttgcttgg gaaaaccgct gaaactgang atganagatg ctggcgagac  360
aagcaaaacta cagcatnggt cannagtgtt tggatcgttt aacaattttc cctggggaag  420
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<210> 4826

<211> 511

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-021-Q1-E1-A4

<400> 4826

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ctgtttcgaa tagatggctt ctatttcaac cccttttccg atttctctcc acccaaaaac  180
cgtacgatca aagccgttga aattccgagt ttgacctgt ccgatcaaag cttccgggtc  240
agaaactcct gatctaaccg tagcgacacg aaccggatcc aaagatctcc cgatccgaaa  300
cataccggga aactacggtt taccaatcgt aggaccaatc aaagaccgtt gggattactt  360
ttacgaccaa ggagctgaag agttcttcaa atcacgaatc cgtaaataca actccacggt  420
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<210> 4827

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 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
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 ttcccgaaac actcagcttt agctttcggg cacttggttaa gactgctaaa aaaaggacca 180  
 gtggattacc aacgagtcac attacttatg ctcaaggcat tgctccaaca cactcccatg 240  
 gatgcttcgc agagtcccca catgtacaca attgtttcac agctagtcga aagcactctg 300  
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 ggcaccggtg gatccacccc tcaggattcg agttactctg aaaacggggac tgatgagaaa 420  
 acgcttgtag ctcagacttc atttaaagcc cgaagcggac tcttcatacg caatgatggc 480  
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 tgagagattt tctggatctg tgatacgttc caggaaacat ggcgacgatg aaaagtttga 180  
 taggtctgat aaacaaaatc cagagggcgt gtactgtcct cggagatcat ggcgggtgaag 240  
 gaatgtcgct ttgggaagct ctccaaccg tcgctgtcgt tgggtggccag agttccggaa 300  
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<210> 4829  
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<212> DNA  
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 <223> Clone ID: LIB22-021-Q1-E1-B12  
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 gggccaggca atggattctt agccatggcg gtgtgattta tattccttgt tggggaaaag 180  
 tttggctctc ggtacttgga atctatgatt ggtctggagt caacccgatg cctcccgaga 240  
 tttggttgct accttatttc ctaccaattc acctagggaa agcttttagc tatacccgga 300  
 taacatatat gccatctctt tatctatatg gcaaaaaatt cgtgggtcaa attacacctc 360  
 ttattatgca actacgtgaa gaactacact tacaacctta tgaagaaatc aactggaaca 420  
 aagcgcgaca tctaagcgca aaaggaanac a 451

<210> 4830  
 <211> 518  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 ctgatgatat gagacgaaga gaaagaagtc ttatcactca tcctttctc ttatgaatct 180  
 ctccgccgac caagctcccg tcaccgccgt cgacgaacta gctccgcctt ctcaaccgca 240  
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 ttcccgaaa cctcncctta nctccgtgt ttctgttaaaa gctctcttca agcctctctc 420  
 tagtggtaac aaacaactcc aacggnnaan nggtcggggt cagaccggg tttctctccc 480  
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<210> 4831  
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 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-021-Q1-E1-B4

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 agctcggcgc ttgatctcgc tatctctcag agagctgaga gctgaggata ttggaaattt 180  
 ggaagggtgga atctcaaagc gctgaacttc ctgggtcaaag aagacatata ggcggtcgaa 240  
 tgagtcaact gctagagcag atatatgggt tttcgagaag atctttgttt cgggtcatat 300  
 ctatgggtcc tataccttgt catattgcct ttatcatgga tggaaatcgg agatatgcaa 360  
 agaagtgtgg tcttttagat ggggtctgggc acaaagcggg gttttctgcg cttatgtcga 420  
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<210> 4832  
 <211> 506  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4832

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 aaagaaggcg gaaaacatag tcgctctttt aaataataaa gagaaaatct cagaaatcag 180  
 agacaaagca gtagcaaact gtaacaagta tggtggcctc tcatcaacgg gaataacata 240  
 taaatctggg tcttcagctt catttggtgg tagttttcaa agtggttcaa gcaattttga 300  
 cagctacaag gatagagatt ccagagaaga caagaatgac tacgagtctt ttcaaaagtc 360  
 aagacgtggg gttaaaactg aggagcaaag ctacacttct aagaagagtt tttcacgcta 420  
 tggcagcacg gaccatgaca atctatccag tggtaaaaag tcacccgatt ctgccaaaac 480  
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<210> 4833  
 <211> 499  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4833

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 aaaaaggaaa acgagataat ggtgttacct tggagatcaa gaggaggagt agcaaagaga 180  
 cgtaatcaat tgatttcgg cgatatctcc gtcgtggaaa ccaagattcc agttcaactc 240  
 cgatcgccat caaggataga gcggattcag tcaccgcgcg tgctgttgac gccgcgtgat 300  
 gcggtggaga taagtcggag attgcaaac gcancggcgc gtgaggagta tgccgagtgt 360  
 ttggagattg tgagcaaaat caagaacttg ggaaagaaga aggggacacg aancaagaag 420  
 tgtttggtcc aaaaacggaa gcgttttggc tttgtctcct ggttttgaaa gattcgcggc 480  
 ggcgcntga tggacacat 499

<210> 4834  
 <211> 449  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4834

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 tcgcaactag agaagctaatt tccattgaag ttaagggtgg gataattttt ggttttagna 180  
 natactaatt gctggagtac tanctgggga atgttcttac agtgagagtg gnntttcatc 240  
 anactcaang aattcccatg aaaagcaaga anaggtttcc cgctgggtatt ttggaagana 300  
 agaaatagaa gagaattcac cgtcaangtt ggatgggtant gacttaaaga aggaaacata 360  
 cctccgcana tcctactgta catttttgca ngacttgggc atganattga aagttcccca 420

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449

<210> 4835  
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<212> DNA  
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ttctccggtc aattcgaatt cctcagagag aaatttgtag tcgagagttc cgcgtgaaat 180  
acatggaaat gttggcggcg ttggactcgc gttcttctct ccattctcat cgttccatgt 240  
ctcgcgttga cttttttgcc ggtgttcgta tgaaaccatc tcctacaagt cctgttccga 300  
atacgctcgc aatatgtggg aagtaaactc tgttgattcg actcttcctc ctccctttaa 360  
gtaattctc cgtttgnttt tcctttgcaa ccggaatttc caagattcaa atccgaaagc 420  
tgtgaattaa cctggtaanc gtcttggtgt tagtccta ttaagggaag tggattcttt 480  
cccgggggaa agaaattaa 499

<210> 4836  
<211> 458  
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<400> 4836

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tcacagggag acattctcag ccacagacga agaanaaaag attcttcaaa tcgacaggaa 180  
acacatcagt tcttacacaa gacgcaacag accagacatg ttctactcat cccacctcat 240  
cctagacaat gctggcctgt ctgaaccagt tttcgccacg ccttttagcc cgtcctcgtc 300  
gcatgaagag attacaagcc agttttgcac tgcaagagaa cagtccctcaa gtttatactc 360

agctacttct anaaagcaaa cgcagtggct ttaaccgcta nttctaatag ncacngagcg 420  
antgcncaaa aagctgctgt gatggtgaca tccaaanc 458

<210> 4837  
<211> 523  
<212> DNA  
<213> Arabidopsis thaliana  
  
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<400> 4837

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gcttctcttc aaaactcttc tccccgtaag ccacctgaat cgtttctcta cactctctgg 180  
tatccgcgtt ggcgattcat ggactcctct gctccggaac atctccaccg ctgggtctcg 240  
gcgtcgagtgc gcgattgtga aagctgcgac ggtggattcg gattactcgt cgaaacggag 300  
caatagcaat gagcagagag agacgattat gcttcctggg ttgcgattac aatcattggc 360  
tcattgtaat ggagtttctt aaagatcnag cggccaaagt agggattaag atgatttgat 420  
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<210> 4838  
<211> 441  
<212> DNA  
<213> Arabidopsis thaliana  
  
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acagaaacat cattgattcc gatctcaagt tttgtctttt tgatttcata tacacagata 180  
catagataac aaacacacat ctttgatcaa atgtctggac tttggagatt gaggaatcta 240  
aagtctctag ctttacatgc tcgttcgatt tcacctgttt ccaatcttta ttctctggaa 300

ttaggatcat gccctcgctcg tcgtattcaa gaacgattca aatcggaaca aagnggcgga 360  
ngaagaagag gagatgattt ccggttccgg tgactcntcc ggaagttaag agcaagagcc 420  
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<210> 4839  
<211> 550  
<212> DNA  
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tccaatatat ttggtcgttg ggtttttatat ctgaccaaac atacagctta ctgcaacttc 180  
aatgcgggttt cgaatcgttt attcactcct ccaaacagtg taacaagatt ctggagatag 240  
cggacaaaga aataggtaac atagaccaat acagtgtcct caccacagct tgtgttgcca 300  
atgcttccca gtcaaataatg ttgctaaaga aaagacctat gactaaccgc cgtgagcgaa 360  
cagtatgatt cttgttacgg gagaaacaca ctacaattta attcaatcct tccaagaagg 420  
gttcaaaaaa gccctccaat gttccaacca aggaacttgc aacaatccaa aaatggggat 480  
aacttgcaat tgatggctct tgaantgaac aactgggaat tgactcctcc cttcctccgg 540  
gtttctaaaa 550

<210> 4840  
<211> 445  
<212> DNA  
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<400> 4840

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atagaaaaat ctcaatccgg gcatgttctc aggttggtgc tgctgantct gatgatccag 180



tgctggatag aattgcccgg ttccaaaatg cttgctggag atttcttaga ccccatataa 240  
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 atttgatcaa atggngtctt gtactaaagg cactttcagg tcttctgct cctaattggg 360  
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 <211> 520  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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 cctctgtatt taagctttaa caccctgttt ttgggttcca acgttcaatc ttcattcttct 180  
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 tcaactggtc taaaccttag attttgtctg catttcggga taatcatttc atcgtcaggg 360  
 ttcttcaacc aaactacatt tacagaagaa gaagaaagaa agaaaaagtt ccgttaactt 420  
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<210> 4842  
 <211> 503  
 <212> DNA  
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<223> unsure at all n locations  
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ctctagctcc aggcgttaat ggtccaacat ggaacacatt gagattcgcg tttctgctac 180  
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 ttgttcatgt tggctttctc attgttaneg catctactct ctttatcctc ctcaattggt 300  
 ttcttgctca gacaggctta ctacaagtgg taacacagat gcaggagctg aatttggtac 360  
 cgtatgatca nnacaaatgg atcatgggca caaccnggtt gnangcaaga cgcttgtgtt 420  
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<210> 4843  
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 <213> Arabidopsis thaliana  
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 ccgccctcgg ccgtcatcct tcagtcactc ccgttatacc tgatcaagcg cgtgagatcc 180  
 acacaactca cagcctgcc ttctcgggtt tctcccaaaa ctctggactc tggagcaact 240  
 caaattacgg ggaagacgtg atcgtcggcg ttttagatac tggaatctgg ccggaacatc 300  
 caagtttctc ggattcaggt ctcggtccaa ttccatctac ctggaaaggc gagtgcgaga 360  
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<210> 4844  
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 cttctaaca catccttgaa tatttgggtct ctctgttttc ttcaaaccag gccaaatatt 240  
 caaggatgtt gttggaagtc catactatgt tgctcctgag gttcttctaa aacattatgg 300  
 tccagaagct gatgtgtgga ctgctgggtgt tatactctat atcttactaa gtgggtgtccc 360  
 gcctttctgg gcagaaacac agcaaggaat atttgatgct gtgttgaagg gatataattga 420  
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<210> 4845  
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 <212> DNA  
 <213> Arabidopsis thaliana  
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gagtttttgc tcttctcgtc ggtgaaagaa aaatcgagat gggttcaact ccgttttgct 180  
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tgggtttaag anccgtccaa nctttgctcc gaantaaagg cggcnacggc gttaatttaa 360  
aaaggngaa naaananaaa aggcgggttaa cgggnaagaa gaagaaatcc aagggtttta 420  
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<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-020-Q1-E1-H2  
<400> 4847

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ttaagcacia gaatctatgc cttgtcctct ccttcgtagc cattcttggc tctgtggctt 180  
tcttcacagc ccaattaatc tccgttaaca ccaacaataa tgatgattcc ttattaacta 240  
cgagccagat ttgccatgga gtcacgacc aagactcatg ccaagctctc ttgtccgaat 300  
tcacgacgtt gtcgctctca aagctcaacc gccttgacct attgcacgtg tttttgaaga 360  
actcgggtgtg gcggcttgag agcacgatga ccattggtgaa cgaaggctaa gattcgctcg 420  
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caaanggttc gggttg 496

<210> 4848  
<211> 517  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-020-Q1-E1-H3

<400> 4848

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aagagtcttc tcttcttcga agctcagaga tctgggtgtc ttctctgtaa ccaaagagtc 240

acttggcgct ctcaactcgg tctcaccgac ggcaaatcaa gcggcgtgaa tctgggtcgg 300

aggttactac gaacgcccgg gagacaatgt gaaaatttgg attaaccgat gggcttttaa 360

cgggtggaac gaatgaatgg gcgttgggaa gtgtgaattt gaagttacng gggaaattca 420

aattnacaaa ngcccaaacg gggcgaaanc cttggggaaa actccnaatt tgacggccaa 480

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<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-020-Q1-E1-F3

<400> 4849

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cggaggattt cgctagagcg gtagacgatg ggcttaaact cgcgaaacgg atttatttcg 180

gcaaagaccg agccgttgcg gcgccgagac cacctgctcc gatggacaga tcttccacta 240

cgcagcctta ctttctaca gcacctatgg tttacgccgt tatacccgac ccgggaattg 300

tggataacct ggatttgcct agctatcagc ctcaactgca acggaagggt caaccaaccg 360

gctttgatcc ccccggaaga tgaattcaat tganctgggc ttgaatggta accccaanac 420

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<210> 4850

<211> 435

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-019-Q1-E1-F10

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tctagtgtcg tagatggagt gtttggactt cagaaagtga catctgctct tatgtcaatt 180  
gatggacatg gnttanttcc caaaaatctc tctgctgtta ccggccatgg aaaagctcca 240  
atgttgacta gctatcattc aaattccttg tataatcgac agggtccttt acaatctaac 300  
tcttaaaata tgttatcctc tccccctggg aaagggttcaa ctatgaagaa gatanccatc 360  
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tccccctganc aggcc 435

<210> 4851

<211> 458

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-019-Q1-E1-F12

<400> 4851

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gtggcaagtg cgggtggtcaa agcgagccaa gagtggggaa tatttcaggt gggttaaccac 180  
ggaatccga ccgagctgat actgcggttg ctacaagtgg gaatggagtt tttcgagcta 240  
ccggagacag agaaggaagc cgtagcgaag ccagaagact ccttggacat agaaggatac 300  
agaaccaagt accagaaaga tctagaaggt agaaacgcat ggggtggatca tctctttcac 360  
cgcatctggc caccgtctag agtcaatcac aaattctggc ctaagaatcc tccagaatac 420  
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<210> 4852

<211> 469

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-019-Q1-E1-F3

<400> 4852

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caaatactgt ttcagatcaa tcaatcagTc aatcatggct agctctggaa acaagaacat 180  
caacgccaaa ttggtattac taggagatgt tggagctgga aaatcaagTc ttgtgctacg 240  
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tcaaacattg gctgtgaatg atgcgactgt gaagTTTTga gatatgggat acanntggTc 360  
aaggaacgat accacaagtt gggctccaat ngTactacaa gggTgcaanc tgctgcaata 420  
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<210> 4853

<211> 511

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-019-Q1-E1-F5

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cttctctctt cattcgtctc ctctgttgag tggctcgata tcgattcctc agatctcaaa 180  
gctcttcagg tcatcgaaac agagctcgga gtcaacagTc aacgttcttc ggccagtgat 240  
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gaatacgTtc tccgtgtcac gaggtctgTc taccgatcca ggagcttgac ggggactatc 360  
tctccggTca tcggaatgtt gtcggagctc aagggaactt actttgtcct aaataaccag 420  
tttggTcaac gctgttcccg gtgggatatc cttaagcctg ttaagcaaac nttgaaagtt 480  
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<210> 4854

<211> 454

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<400> 4854

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tgttgctctt cttggcaagt ttatttctgt ccgtgagccc aacatcagat atctaggctt 180  
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gtctcagata atcacctcct tgaaagaccc tgacatcagt attcgtaggc gtgctcttga 300  
tttattatat gggatgtgtg atgtgtcaaa tgcaaaggat atagtcgaag agttgctgca 360  
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<223> unsure at all n locations  
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tcttgggacc aatccgggaa attggcaaat cctacgctaa ctaaaacgca gtcncaagg 420  
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<210> 4856  
<211> 430  
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gaagatcttg gtgtggaagc gaaggaagcg gctgtgagag aagtggcgaa gctcttacct 240
ttacctgaac ttttgcagtc tttttcttca atcaaggccg attacatcgc tcgtcaacag 300
gcaaatgatg cacagctcag tactatgggt gctgagcang ttgaacaagc tcaagctggg 360
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<210> 4857  
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 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-019-Q1-E1-G3

<400> 4857

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taccggtaca tctgtgacac caagggtgct tttgtccaac ctgcattata tgaagccttt 180
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gggtccanctg agatcattgt gcacggtaaa tcgggtttcc acattgacct ttaccatggt 300
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cactggggaa tgaagatttc aaaaaggang ggcttcaaga agattgangg agaaattaca 420
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 ggtgacggag gggttagttt ccctaaagga cgggtgatgc cgaagataac gaccggagca 180  
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[illegible]

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504

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 acagatgatt tcaatggagc tcagctgaaa gcagtgtgtg tagaggcagg catgttagct 300  
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 caaaaatccc agaagaaaat catccgttgg ttaatgcttg gtacgcagga cccgaccgg 360



taactccggt tgagataacc ggatctttgt gaaggtantt atggaacaag gaggtggtgg 420  
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 gaagaacatc ttagcggtag aaacactacg aaacacgata atgggagggg cgttaatggc 360  
 aaccacttgc atctctctct gcgcangtct cgctgcccgt tttaaagcag tacttatagc 420  
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 tgatgcacat atccatacct gagaaggctt acacttctcc aattttggtg ttcttggtcc 240  
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agtgaagatt aangcaaaaa aaattcttgg aagattgggtt catcattntg ctctcaaaaa 360  
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 attggattga aagaattctc cggccaaacc gggnnnggatt gaccttttga aggaaaaancc 480  
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 <211> 490  
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<223> unsure at all n locations  
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 gaactactac tagtgttttt ttccgtgaag taangagaaa cggtaacttt ttctatttgt 180  
 tttcaagaaa agccaaagaa aaaaagaatt tttaatatac tctgtttttt gcaatgattt 240  
 tgttttgtga aatttttctc ggagaagaaa gtaatttaga agacggagag tggcaaaacg 300  
 aaatataaaa aaaaaagttt tcaatttctt ttaagaaaaa aanagctttt tcccttctta 360  
 aaacccttcc tctgttcaga aacagagaca taagaagaaa gatagatnac aagcctaatt 420  
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 <211> 486  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4875

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cggatcatcc ggttcgggaa cgcgcggatc gtcaggctcc ggaacaggcg gatctcgttc 180  
caccacatct actcagcaga atggtcggat cttaggtcgg ccgatggagg aagtacggag 240  
aacctatgag tttggtcgtg agcttggctg tggccagttt ggtgtcacgt acctcgtaac 300  
tcacaaagag acgaaacaac aggtcgcttg caagtcaatc cctacgcgcc gcctttgttc 360  
acaaaagacg aacattgaaa gatgttcgcg cgttaaattc aagaattatg caaccaatct 420  
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acaact 486

<210> 4876  
<211> 508  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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ccgatcggga aaccgtatcc aagctccgtg gctagtctgc gctctttgga ctttgaaaac 180  
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ancggcgagc gagagcggat ttgggatttt aagaaaaaga aagacgaagc ttcgttccaa 300  
agtgttcaact tctttttcgc caggtttcat tgcatttatt gtggattgga ttgatggnaa 360  
accancaagn ccctcttctt tcagtcgagt tactcgtanc cttgactgaa ngatcctaaa 420  
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<210> 4877  
<211> 502  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 4877

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 tctcgatttc gtttttttct cttgtttaat ttaaaattat tgtaaagcac gtggatttgc 180  
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 attttgagtc taactaagtc naagttgact caagtagagt ccgaaagcct cctgggggta 420  
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<210> 4878  
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 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 agangagaga tcagagaaac actgatctaa tagtggaaaa tctccttttg caanccttgg 420  
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<210> 4879  
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 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4879

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ctctgaaaac tgcgtctcta taccagcttt ctctgctctc aantccactt ctccacgcac 180  
cagtggcacc atctcttccc gtcgacgaaa cgctccacg atcagtcact ctctccgccc 240  
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tcatccaagg tcttctaat ggggctgtgc tcccgatgic tcacantttg tacgatgaag 420  
tcatganagt ataaccccaa ngaatccctt taagggtttt aaccgtgatt ggtttcggtt 480  
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<210> 4880

<211> 449

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-019-Q1-E1-B7

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tgtggtcttt acctcaggta gtgccatcgg ttacggctca gcaatgactt taactgacac 180  
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aaaggaggag atggcgaaga cctttttgac tttgcataca agcgccggtt aacanctgtg 360  
gatggnaatt gggttggtgc ctgggggtttg gagaaaatgt atgggatgct cttgtctcaa 420  
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<210> 4881

<211> 469

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-019-Q1-E1-B8

<400> 4881

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tgaggaagaa cctctgattt tgaatcgaga ctcaagcggt ggtctcgtca tcgttgacgt 180  
tgtaaatggc ttctgcacaa ttggctccgg caatatggct ccaacaaagc ataatgaaca 240  
gatatcgaag atggtggagg aaagtgcaaa gcttgctaga gagttctgtg atcggaatg 300  
gcggtttttg cgtttattga ctctcatcat ccagatatc cgagagagacc ttaacccct 360  
cattgtatta taaggaactg aaagaatcaa gaacttggtc cctggctccn gaaaatgggc 420  
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<210> 4882

<211> 441

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-019-Q1-E1-C10

<400> 4882

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actcgacctg atcgctgata tcgtcgagat tccactcaac accggaatgt tcaagaagga 180  
ttgcgcagat ctactcgac gagtttgtct cttaacgcat ttgttagagg agattagaga 240  
ctcaactcct atcgattccg ccgcttcgtc gtcgtcggag aatgattggg ggtctgatct 300  
cgtggtcgga cttcaagccg cgaagcgtct tctctccaca gtcgattcc aagctcgca 360  
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<210> 4883

<211> 477

<212> DNA

<213> Arabidopsis thaliana  
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ttccccctgac aacgtctatg gatcaccttt gagtgggggtg tcatctcttg cctatgatga  180
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ttcgctgatg gggaattcgc taacaagcgt atgggattcc cttgaatgct cttggaacaa  420
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<210> 4884  
 <211> 457  
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 <213> Arabidopsis thaliana  
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cttctccgtc acgttcaacc atgttttaag cgggtgataaa agtttggacg attttgtttc  180
gaatcttgct aatgtcttca acgaggcgat ggagcgaaag gtaagtttta ggggtctagc  240
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caaggttgta gataaagatt catctcagga aatatatcaa aatgggatgt tgtccaacaa  360
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<210> 4886  
<211> 501  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-019-Q1-E1-C8

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<210> 4887  
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<212> DNA  
 <213> Arabidopsis thaliana  
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 taggtcagcg taacattctt ttgcagacca ttggagataa gtttgaacta tggaacctca 240  
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<210> 4888  
 <211> 489  
 <212> DNA  
 <213> Arabidopsis thaliana  
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 caatctcccc ctaatctggt gtttctcgct ttttctctg ttaatcatct gtctttcaaa 240  
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 agatcgtttt ttcaaatttc ttctgatttt acctcttttt ttcttcttag attttagtga 420  
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<210> 4889  
 <211> 470  
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<223> unsure at all n locations  
 <223> Clone ID: LIB22-019-Q1-E1-D3

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 acaattaaag ctgagaatga tttagatggt gctgcagcac aagaagctgg atatgaanag 240  
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<210> 4890  
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 cgtttcgtct tctactgtca ctcccacagc tccaactggt ttctctgatt gtttttcttt 240  
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 gccggnc 427



ttc nt t t t g c t g g a a a t t t g g g t c a a c a a c c c a c t t c a a g a c c a t c a g a a n t t g t c t g c g c 480  
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<213> Arabidopsis thaliana  
  
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g a g a g g g a g t g t c c t g g t g t t g t c t c a t g t t c t g a c a t t c t c g t c t t g t c c g c a a g a g a a 120  
g g c a t c g a a g c a g t a g g a g g a c t t a t a t t c c t t t g a a g a c a g g a a g g a g a g a t g g a c t t 180  
a a a a g c a g g a c g g a t a t g c t c g a g t c a t a t c t t c c c g a c c a c a a c g a g a g t a t c t c c g t c 240  
g t t c t t g a a a a g t t c a a a t c c a t c g g t a t c g a c a c t c c c g g c c t c g t c g c c c t c c t a a g g 300  
g t c a c a c a n c g t t g g a a a a a c t c a c t g t g t c a a a c t g g t c c a t c c g t t t g t a c c t g a a g t 360  
g g a c c c g t c c n t a a a n c c c g g a c a a g t c c t c a c a t g c t a n a c a a t t t c c t g a a t c c a t t c 420  
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t t c t c g c g c c g c c t t c a g c c g a t t a a t c t c a a c g g a c a c a c t c c g a t c a c a a t c g a g a c 120  
t t c g c t t c c t t t c a c a g c t c a c t t a t g t g a t c c a n c g t c a c g t c c g t c g a a t c a t c g a g 180  
t c a a g a g c t t c t c g a t t t c t t c a n a a c c a t g g c g t t g a t g c g a n n t a n g g a a a t c g c a g c 240  
c g a t t c g c a t t a c a t n g c g a a g c t a a t c c g a c g g t t t t g t c a t c t c t a c a c g n c a a g a a 300  
c c t g t a g c t a t a g g c a t g g a a g c t g c g a a t a c n a c g a a a g g a c n c g a n t a n t a c t g g n t a 360

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gcagccgata gatgcccga tctacaagtt ccttgccatt agaagcaatc ctaacgtgac 420  
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nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nccatcaca aagggtgattc gtcgnccttca 180  
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aaancggcag atatan ttac gtnggaagac aaagaaaatg tcaggangtg taatttggcc 360  
 gtgctacaat tgcaaggggtt gcaatttgaa attgattgga gtaacancct cctaataccgt 420  
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 agctttgcat gagcctgatt ttcagataaa caaagatgag tcacgataga agtgtaacg 360  
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 cctgaccagc tcacacggtg gtactttgtc gggttcttga gctgcggttc tcttgtttca 180  
 atgtttgcct cgccgttggt tgttattaac ctagtgatc ggactaagag cgttgagttt 240  
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gttattcaac agcgaatgcc tttgttttaa caccaaattgg nataaggaac gaatccntgg 360  
gaattgtgca nctgggcttt gtaactgtta ctaacacaag gaattcnaat agaaagaaga 420  
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gtctttgacc accggaggaa tgggatgtct ttgtcnaatt gtcactggaa ctgttccttt 180  
caatattcct attaanagca caaccgctgt ctacttccc cgtgcttgta acatgcctag 240  
agtcnctctt caatgccaa ccaatattgc tccagctgct gctcctggac ctgctgctac 300  
atltggacca tcatgtcttc caaggaccaa gagacggntt caattgttcc aagagccaaa 360  
tccggnnaact caaacaccaa cagtctgata caaccccgac caattacaac aaccggcttcn 420  
aacnggtggg agtcccaac attcanaacn aacgggnggg aancaacaan ttcgaacctt 480  
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<210> 4900  
<211> 562  
<212> DNA  
<213> Arabidopsis thaliana  
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<400> 4900

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acgcgatggc ggtgacgttt gtggcgacg cgctggcggg aatagcggcg attatgggtac 180

tggtttggag tatcagttac agaggtggat tggcctgnga agctactaac aagaatctca 240  
 tcttcaatct gcatectggt ctgatgctca tgggatttat aatcttggga ngagaagcca 300  
 tcataagtta caaatcgcnt ccgctgggtga aaaccagttg aaagaagttg attcaacctt 360  
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<210> 4901  
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 cacctaattg tgctagacct ggactacacc cggcagggtg cccgatacct atggttccac 180  
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 ttggtgctgt tctcatgct cctcaacctg gaaacatggt tttgganctg gtcgtggaac 300  
 tcagttgggg gcaccttccg caacaacaan ccaccaanat aatgttgga cattggccta 360  
 attaaacttc ccccttgata tccgaataac caaccttaac tggtggtccn catcccaacc 420  
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<210> 4902  
 <211> 462  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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acgatagtc gccacgcgta cggttcatgt gtacttttgg aggaaggatc ttgccacgtc 180  
cgccggataa tcagctctgt tacgtcggcg gcgataatcg catggtcgct gttcatcgtc 240  
acactacttt cgctctcttc cttagtaaac ttgctaaact ctccggtaaa agcaacataa 300  
gcgtgaagta ccagctacca aacgaagatc ttgacgcgtt gatttccgta tcaacggacg 360  
aaagatgttg agaacatgat ggacgaatac gaacgcgtcg cacanaatca aaacccangc 420  
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<210> 4903  
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<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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cagtctttct ctcccttcat cctcttggtc tttccgacac cgccggtaat taactctctc 180  
atttcccgtc aatgtcttct tggttattca atttaggttc ttgaactcta tcgatcgtaa 240  
tttgtttacc tagatctggt ctgaaatcgt tgaatcttct taattcaagc ttagttcggg 300  
tcttgatttg tgtgtcattg tgtgttctgt tctgtttcga atctttttga atcggtatct 360  
gatttttgtg tgtgttccgt tttccttttg gatatacaca agatgaagaa agaagttcct 420  
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<210> 4904  
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<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-018-Q1-E1-A4  
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ctcttctctt ancctcattt ccaccgccga tgacctagac gacctctctc tcttccaccg 240  
cgccgtcgtc tcttctctca ccaacaacaa ccgtcggtctc atctcctctc ctccaaatcc 300  
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gaaaaggctt ctccaaggnc aacaagatnt ctacaacgtt tacatccacg caagattcaa 420  
nctctctcgg gtctctctct ccttctcgaa ntcntcaat caaatcaaan ggctaaagtt 480  
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<210> 4905  
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<400> 4905

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acagcttcaa tggcggtgca aatgaaaccc taaaagtatc tgagcgaagg ttcaattttg 180  
aagttgtttc ccagaagaaa gctaagaaac ttcgcaaggt aattttgaaa gaggatgtga 240  
cggatttggg taagcaaggg caattacttg atgtgaaagc tggatttttc agaaacttcc 300  
tcttgcttac tggaaaggct cagcttatga ctccacttct gctcaaggaa ttnaagatgg 360  
aagacgaaac ggattgaagg aagagaaagc aaaagggtga aaagaaagaa ggcacaacaa 420  
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<211> 478  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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tttcaacaca ctcatgaagt ctgtttacac tgagagatac gaatctcgtc ctttttagggt 180  
cggtagatac aactggacgc ttgtttgtga tccgaaggga aacaagaacg ataacggtac 240  
agggcacatt tcgtatacgc tcgtcttaga caactcaact ctcacctctc aaagtgaaga 300  
ggttcacgta gatctcagat tttacgtatt caacaagaaa gagacgaagt actttacgat 360  
ccaagatact gatgtatggc gattcagtgc aatcaaaaga atgtggggat tttctaaggt 420  
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<210> 4907

<211> 438

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-017-Q1-E1-F6

<400> 4907

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atagaggagt atcagtttta gctgttgctg ttggtctgat tttattagat ctagtatttc 360  
ttcttctaac ctccgcgaga gaccagggga taataccacg taatctgtat cctcctgaac 420  
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<210> 4908

<211> 438

<212> DNA

<213> Arabidopsis thaliana

<223> Clone ID: LIB22-017-Q1-E1-G1

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gttgacgtaa aggttgatac agtagattct gaatcaaacc gttctattga catggaacat 180

gattctggaa cagatcatca agaagaagaa gcaaattggga aagaagatcc aacggttgaa 240

aatctggctg ttgattcttc ttgtttggac attactactc catctccatc tgctgctaca 300

gagttcatat ctcaggagaa cgaacgttca gacaccgagt ccaaacctct ggagaaaaga 360

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ccctggagaa agaacatt 438

<210> 4909

<211> 459

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-017-Q1-E1-G12

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acaaatttat cgacaccgct ttcgctatag acaacactta ccttctcttc tccgcctacc 180

ttgtctctc tatgcagctt ggcttcgcta tgctctgtgc cggttccgtg agagccaaga 240

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atctgtttgg ctacgccttt gcctttggat ntccgtccaa tggtttcanc ggtaaact 360

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<210> 4910

<211> 411

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-017-Q1-E1-G6

<400> 4910

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ggctttgggt ggggttgggg tgganactcc aacaattcaa nnnnnnnnnn nnnnnnnnnn 180

nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnccaact attcaagtgg ttcagcttca 240

accccaaggt caggatgggg tttcggctct agtcnaaacg gctcaagctg gggttggggg 300

tngggcngng ttccaacata canacanctc aaggtcnggt tgctccggtt gggcntgggg 360

ctaaaaaat acagctcggg atctgcgctc gggttcggct gggganatgg a 411

<210> 4911

<211> 437

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-017-Q1-E1-H2

<400> 4911

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tttccacgac gaaccaatca actatagaca ttgcctttgt ctctggaata aaagaagaaa 180

cgtccaacat ggaaaatcgt ataatgagtc ttacagggtt gccactctct agtctacttg 240

aagagaaaca tatagcattt aatgctaagt tcaatgaatg cttcaacctt tctgacaagc 300

ttgatctga aactttgggt gttggtaaag cagcaatcgg gaacatgctt ggaggcattg 360

gttacttcta tggatcaatca aagattcaat ttcccaaaag tctctgggt aaaagtggag 420

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<210> 4912

<211> 498

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-017-Q1-E1-H3

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aatcagaaga ctttccgacc taagaagagt gcaccttctg gaagcaaggg tgcacagctt 180  
cgaaagcata tagatgccac cctaggaagt gggaacttga gagaagctgt aagacttcct 240  
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aatttgctat atggcaccct taccgagttc tgcacacctg ataactgtcc tacaatgact 360  
gctgggcca agtacgagta tagatgggca agatgggtgt acaagattaa agaagcccaa 420  
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<210> 4913  
<211> 468  
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<223> unsure at all n locations  
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atccagcaaa ttcttaggag gaagcttcac tccaatcac ttgcaactcc ggttttgtct 180  
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gctgaacatg gattggagag tccaaagtac cttgggctca tgatgggaat cctanctcat 360  
atgancatgc ctcgattcgt cntgggcaac aagtttatca acaaactctgt gcacatgcc 420  
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<210> 4914  
<211> 487  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 4914

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cccttcaaca aagaaaatgc tcaaagggtc ctgaacacca aagttgctgg tcacattgct 180

agtgatggga agctcgggtc actcgtatgac gaccaaggcc ggttcttcaa gccacttcan 240

ggagattctc gtggcgaaca cgaggctaag ttctatgagt ctttcacatc gaacatgaag 300

gttccagatc acatccatag atacttcccg gtgtatcacg gcactcagct aattgaagca 360

tccgatggat ntggcaaact tctcaacct ggtcctgatg atgttggttc aaggtaacga 420

aanccgtccg taatgggatg ttnaaattgg atttaaggac atnggacccc gatgtntcaa 480

aagaata 487

<210> 4915

<211> 423

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

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<400> 4915

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aatggcaag ccaacggacc tcttggttca actctcaatc ctgctaacaa tcagccaatt 240

gctcaagttg tggaaacttc tcnagaagat acgaacaang nttgaaaagc ttgccaagga 300

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<210> 4916

<211> 477

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-018-Q1-E1-A11

<400> 4916

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tgggctcgat tcgtgattcc tcaaagttca tcatccctaa ggcaactgtca cttaatggca 180  
tcggaatcga aaagctacgc taggagagat cgtcttcttg agattgaggc cactgttcga 240  
aagtgggtggg aagacgagga tgtattcaga gccgaatctt gtgagaatct tccaaaacca 300  
ggagaaaagt ttttctcaac ctcccttttc ccgtatatga atggttatct acacattggg 360  
catgcctttt cattgtccaa ggttgatttt gcttctgctt accataggct aagaggagct 420  
aatgtgcttc ttccatttgg ttccattgt actggtatgc caattaaggc ttctgcn 477

<210> 4917

<211> 513

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-018-Q1-E1-A3

<400> 4917

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ataagctcac tgacgatcag attacagaat acagggaatc tttcaggtta ttcgacaaga 120  
atggtgatgg ttccattacg aaaaaggagc tcggtaccat gatgcgttca atcggtgaaa 180  
aaccgacaaa agctgatctt caggacttga tgaacgaagc ggatttagat ggtgatggaa 240  
ccatcgattt ccctgagttc ttgtgcgtaa tggctaagaa tcaangtcac gatcaagcgc 300  
cgcgtcacac taaaaaaaca atggcgggata anctcactga cgatnagatt acaagagtac 360  
aaggaatctt caagggtant cgacaagaat ggtgatgggg tccaatacga aaaaaggact 420  
cccttacgtt atgttttccc cccggtaaaa aaccggnacna aaacctgttc ttcangacat 480  
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<210> 4918

<211> 466

<212> DNA

<213> Arabidopsis thaliana



<223> unsure at all n locations  
<223> Clone ID: LIB22-017-Q1-E1-F12

<400> 4918

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cccncttcan gcttagccta tcatgagcaa catccctaga tctctcaccg actcagatct 120
ttctctatatt actctcataa tctctttctgc tgttgatcct tggccttttt ctatcaccgt 180
tttttagcat caacaaaact caccggaaaa tctctaacia ccaccaccgt ttaacacttc 240
tcttcctcct cgtcgatcgt ttttaaacca atctttgtgt ttcttgtttg gtttttcggt 300
gaaaaagatt cttctttctt aatgggtttt gaagaaaacc aaaaacagag tccaaaacag 360
agtccgaatc atatcaagca tatgggtgttc aagttccact tccatgttcc tcatctccac 420
atactccctc atcatcaaca ccaacaccac catgatgttc ctaaan 466
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<210> 4919  
<211> 484  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-017-Q1-E1-D2

<400> 4919

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cagaacccat ctcttatctc caatctctcg aaatccagtc aacgcaaate tcccttatcg 180
gtttctctga agacgcagca gcatccacga gcttatccga tttcgtcgtc gtggggattg 240
aagaagagtg ggatgacgtt aattggctct gagcttcgtc ctcttaaggt catgtcttct 300
gtttccacgg cggagaaagc gtcggagatt gtacttcaac ccattagaga aatctccggt 360
ccttantaag cttcttgggc tccaaagtcc ccatcaaate ggattctgct ctgcgtgctc 420
cgtctgaagg gaaacaactg tantggacaa cttgttgaat aaccgatgac atcaaattac 480
atgc 484
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<210> 4920  
<211> 482





<210> 4924  
 <211> 484  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-017-Q1-E1-E10  
 <400> 4924

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 cggtagctgc agatccgatg cctccgacca ccgttacaag ggacggtagc tccgttcctc 180  
 tctacgcaa caaggtaggc ccctttcaca atcccagtga gacgtatcgc tatttcgatc 240  
 tccccctttg tattccagag ggtgtgaaag ataagaagga agctcttggg gaggttttga 300  
 atggggatag gcttgtagt gctccataca agcttaactt tagagatgag aaagactcag 360  
 aggtgtactg taaaaagaag cttaatagag aagaagttga acactttcga aagaactgtt 420  
 gaaaaagatt aatactttca aatgtataag atgatttgcc taattgggga ttcattggga 480  
 aagt 484

<210> 4925  
 <211> 481  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-017-Q1-E1-E11  
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 cgttttacga caagagaatc tctcaagaag tcagtggaga tgctttgggc gaggagttca 180  
 aaggatacgt tttcaagatc aagggtgggt gcgataagca aggtttccca atgaagcagg 240  
 gagttttgac tccaggccgt gttcgccttt tgcttcaccg aggaactcct tgcttcagag 300  
 gacatggaag gagaactggt gagaggagaa gaaagtctgt tcgtgggtgc attgtgagcc 360  
 cctgatctct ctgttctgaa ccttgctcatt gtgaagaaag gtgagaacga tctcctgggg 420

cttaccgata ctgagaaacc aagaatgaga ggaccaaaga gagcctccaa agattcgtna 480

a 481

<210> 4926

<211> 470

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-017-Q1-E1-E12

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ttcaagcgta acaaacaaaa ccaccgtgaa cgggtgcttg ctcgaaaccg tcgggataaa 180

acctttatac aaagacataa tcccttcgcg tttcacggtt ttcaaagcac aatcaaccgc 240

tcctttatac ggccggagcaa ctccagccac caccttcata ttcatactc tcgtcttaat 300

cacatcaaca ggattactcg caacgctcgc acaaaacccc gccgcgaaac tcgccgacac 360

atgagtccca agcccatctt tgaacaaccc tttctccaaa atcgtctctt taacagaatc 420

atacgaagcc aactgcgatg acgtcacaaa gcattgcctg tttatcgtca 470

<210> 4927

<211> 496

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-017-Q1-E1-E4

<400> 4927

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accaagttca ccaagaggtg cctccccaca agccatctct tcaaagccgc cttctccaag 180

agcagagcca ccaacattgg aactccaag acctccctct ccaagagctg cttctctaag 240

agcagaccca ccaagattgg atgctgcacg acccaccacg cctaggcctc cttctccact 300

agcagacgca ccaagattgg atgctccacg acccactacg cctaagccgc cttctccaag 360



66430"1E3EE60

aagattagag tatectcaaa acaacgagct ctcaatgtct ttttggatc ggtgactgca 360  
tgctagtggg tctacagccc gtctaagtgt acatgtccaa aagtggatgg aaagttcaaa 420  
cttaatccta ttaacgtca 439

<210> 4930  
<211> 469  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-017-Q1-E1-F1  
  
<400> 4930

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tttctttgga gatgaaaaga ttcgagaggc caagaacttc gattcactcg cagccaagga 180  
ccagtaccag ttcaggttaag aaagatcaga agccgcgtag tagtagtagt aaaggatctg 240  
gtgtgaaacc gttgaatgcg gctcagctgg tttctagagt tttagatgca acaaacaagc 300  
tctgagccct tccttcaagt cccctgggta actgattcaa actaactggg atnaagaagt 360  
ccctcctgaa agtcctatga gaaatgggta aatgttgcac tacaatggga tgatgcctaa 420  
tgagaaatcc aagaactgaa tggcaaanct agtgggttgt gaanaaaaa 469

<210> 4931  
<211> 488  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-017-Q1-E1-F10  
  
<400> 4931

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agaaaaantg ggagaagatg aagagtatgc aaatgggggtg tgattgggag cattgtttct 180  
atcaagttgc atcttctgtc tccattgtca tttgcaacaa agctttgatg accaatcttg 240  
gtttcccttt tgcaacaaca cttactagtt ggcatttgat ggtaacatat tgcacacttc 300







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gctcgggtggc atagtcgatg atgcagaaga aggtgttaag ttaaacaaca aaggagactt 360  
tgtggtggac tcattctgcta ttgaagctgt gaatgtagat gtggcaaagc caggggttgt 420  
tgttgttga gacgtaaggt gagtgangtg ctggaaactg atggca 466

<210> 4936  
<211> 469  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-C10  
<400> 4936

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gaccgcgtcg tgattcttaa tctctctct ctgttcttct ccgatcaaac ctcattccaa 120  
agaaacaaac catggatctc caaccagaag agcttcaatt cttgacaata cctcaactac 180  
ttcaagaatc aatctcaatc aagaaacgat ctccaagaac cttctacctc ataaccctct 240  
ccttcatctt cctctctctc ttgcctatcc tcgctcactc actcttctact caaccaatct 300  
tagccaaact cgacaaatcc gaccaccaa actcagatcg ttcacgtcat gattggactg 360  
ttcttctaata cttcaagttc agttacttga tnttctctct ggcttctctc ccttctctca 420  
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<210> 4937  
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<212> DNA  
<213> Arabidopsis thaliana  
<223> Clone ID: LIB22-016-Q1-E1-C12  
<400> 4937

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ccatggcaag gattgtctct aatatcccca ttacacgctg tggctcgact agtgttgtca 180  
tctatgacat tcacgctttg caggaaaggt ttacttttgc cgatcagggt cttcctttgt 240



gtatgcgctc ctgcacctca ctgggtatga acgaccacg atggacgact tgaagaaatt 360  
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t 421

<210> 4940  
<211> 425  
<212> DNA  
<213> Arabidopsis thaliana  
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<400> 4940

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cagtgttctt gtaggatgca gaccatcttc tatcgggtgct cctttttcat ttgaaccggt 300  
ggcttgtgtt tgggtcttgt gtgttgtaaa ctctaagttc cctttctgtt tcttctgtaa 360  
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cctaa 425

<210> 4941  
<211> 420  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-C9  
<400> 4941

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ccagattgaa ggaggttga atgaaggtaa aaagggacca agtatatggg ataagttcac 180  
tcatatcgaa gggaagattc ttgatggaag taacggcgat gttgctgtgg atcattacna 240  
tagatacaan gaagatgttg atcttatang acaattagga ttccggtgctt acagattttc 300  
tatatcttgg tctcgaattt tccctgatgg cctgngaact gaagtcaatg aanaagnatt 360

gctttctaca acgatcttnt taatacacnt cttgaaaaag gtattcagcc gatatgtaact 420

<210> 4942  
<211> 423  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-D5  
  
<400> 4942

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ccaactttca gattcccttg attacatata tgcagataat tgtaagtccc tcgagagact 180  
ggattgttgc ttttaacaatc cagagatccg tctctatttc cccaaatgct tcaaactgaa 240  
tcaagaagcc agagatctca tcatgcacac ttgtatagat gcgatgtttc caggtacaca 300  
agtgcctgcc tgcttcattc atcgagctac ttctggggat tccttgaaaa tcaagttgaa 360  
ggagtcgcct cttcctacaa accttgagaa ttaaggcttg tatcatgcnt ggtaaggtt 420  
aat 423

<210> 4943  
<211> 483  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-D6  
  
<400> 4943

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gatcttacgg aaaatgggag acgacttaga ggtgcaagag aagccggcgt tgattctatg 180  
ccatgttttc agaaggggtg atgaaccttc tcttctgtca gctgcatcta agtttgggtt 240  
taagcttgca gacagatggg ctgcaaattc aaaggaatct cctattggga acatcattga 300  
cagttgggtt tccgaaaagg atttggtcgc agaaatcccg agttctgcgt tgcataattct 360  
ctattttcag atggagtaac tatgtggtag aggagcaa atgttgattaac tgggagagtt 420

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tcc 483

<210> 4944  
<211> 469  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-D9  
  
<400> 4944

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ctgaacaact taagacaatt tgtgagatac agccgtctaa agcaatttgc tttaagggcg 180  
cttgctagca cacttgacga ggcagagatc tctgacctca gagatcaatt tgatgcgatt 240  
gatgtggata aaaatggcgt cattagtctt gaagagatga gacaggcact tgccaaagat 300  
cttccttggg aactgaaaga ctcacgagtt gctgagatcc ttgaagcggg agttatattt 360  
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gccgttgtgt acttgatatcc ttgctgggtca cagattgata cancaactga 469

<210> 4945  
<211> 415  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-E10  
  
<400> 4945

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tccgaccacc gttacaagga aggagacacc gttcctctct acgccaacaa ggtcggggcca 180  
tttcacaatc cangtgagac gtatcgatat tttgatcttc ccntcggtnr cccacatggg 240  
gtgnaagata agaatgaagc tcttggcgag gttctaaacg gngatcgggt agttagcggt 300  
ccatacaagc tcaanttcag agatgnnata gagtctgagg tatactgcaa cangaagttg 360

agtaaagaan angtcataca gttcagaaaa gctgttgaga aggactacta cttcc 415

<210> 4946  
 <211> 470  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 tatcgccctc aaaacagacc agtgaagaag aagggatctt ancctttgaa gccagggtgtt 180  
 caagggtttt tcatctcttg cgatggcgga cgcgaattcc aagctgctca ggaagctatt 240  
 aacgtcattg attccttttt cgaggagcta atacaaggga ctgactcgaa agtgaatcct 300  
 ggtttggttg gtaatccaat aaacaaaaaa gttacatttt cgtatagcga ggatgaggat 360  
 gangaggaag atgagagtaa taatggcgag gaagaaggaa aacataggan atgggggata 420  
 aggcagtagt gagtgaangc ggtaatgatc taattgaatg agaaaagaaa 470

<210> 4947  
 <211> 419  
 <212> DNA  
 <213> Arabidopsis thaliana  
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 ggnngcacga cggtgctcga tcaaggcgtt ggctangccg tgattcntgg ttttggtgct 180  
 ttctttgccg tnttcacatc ttttttggtg tggttaaaaa aacgatatgt gggagctcgt 240  
 catacatcgg aatgggttcan tacatcnnga agatcgtttc gacaggactt attgcaantt 300  
 gtcattgtat cacattggac atgggctgng accatactgc aaagtttcaa acgtacatgg 360  
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<210> 4948  
 <211> 398  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-015-Q1-E1-F12

<400> 4948

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 tgatcgattt cacaaccctt agcttcggcg atcttaaatt tgcaaaaaat ctatggcgctc 180  
 ttctcctggt ctttttcttc acaaccagta cgatcagcag cactacgctc cgcttggtat 240  
 ctccgctcaa ccatctccgg tgactcagca gcaacaggat gtgtcttctt cttccgccgc 300  
 gactaacttg catctcaag agaacgctgt cttatccan gccaaactct aatctacaat 360  
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<210> 4949  
 <211> 425  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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 ctaggactgt acctcgtatt ggggacagaa gaatcaggaa gatattggct tctagacatt 180  
 ggaaaggagg ttcaaggcat tcagatacga aaccgtggag aaattattac ttgcaccagc 240  
 agaggagcta tcctatcaag aaaaggaaaa actttgacca catatctgat tccgttactg 300  
 atgattaccg tatgcgtact aagatgcata gaggtagtag aaaagggtcaa ngggcatcct 360  
 ttgtggcaag cgactcccat gtgaaactac nggtnaaatc gttcaaaggt gcctgaacct 420  
 ttcaa 425



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<210> 4950  
<211> 471  
<212> DNA  
<213> Arabidopsis thaliana  
  
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<223> Clone ID: LIB22-015-Q1-E1-G11  
  
<400> 4950

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gaaagtgcga gctctcaaga aacttggcca acctcaaaat ctattatggg aaggaagaca 300  
gatagcggaa agacagggcc tgactctcat gatcaacatg tgatccgccca tgtttccatt 360  
gctgataagg tatcgctacg ggacatagct agagagagac ttgacatagt cgctganaaa 420  
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<210> 4951  
<211> 422  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-015-Q1-E1-G9  
  
<400> 4951

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tctggtaggt tctacgttta gggatcgtag cagcgtcacg acgcatgac aggcgtacc 180  
ggcgtctctg tctagccgga ttgggttgag gagatgtggg agatctctc cgccggagag 240  
ttcgtcgtcc gttggagaaa ccagcgaaaa cgangaagat gaagacgacg ccgtttcgtc 300  
atcacaagga agatgggtca attcgtttaa gttcancctt gggaaagaat ccccttccga 360  
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ta 422

<210> 4952  
 <211> 410  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-015-Q1-E1-H12

<400> 4952

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 agattcttcg gtgaacgggtc acatttcgtg ctacacgacg ccggagggat tcatgaggaa 120  
 gtgttcgagg ttttaaagcc atggattgag ctagggagag tgacgttaca tgatattaga 180  
 gatcaagaac gattcgatgg atattatcat aatcagttca tgatagtga tgattgtttg 240  
 cataggtata gattcatgac gaagtggatg ttcttctttg atgttgatga gtttttacat 300  
 gttccagtga aagagacgat ttcgtctgtg atggaatctt tggaggaata ttcncagttt 360  
 actattgaac agatgcctaa gagtatcnga tttgttaatc ccgtgatggn 410

<210> 4953  
 <211> 417  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> Clone ID: LIB22-016-Q1-E1-A11

<400> 4953

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 tctctcagcc attttctctt ctgcgcatctg tgttttcgtg cttggagctg tacacgtttc 180  
 ttttaattga atagtgattt tgcgttcgtt aattagcctt ctggtacgag tgggctatatt 240  
 tgggaatgat ttaggtggtt ttaagttact gggtagtagt cactgctgag cgatttctgt 300  
 ttctctgtt gaatgattga ttcagaaatt tgaaattcac atcgaaacca aatcttaaat 360  
 catattggta gctttttttt tgttttggtg ttagatactg tttttttata gtattaa 417

<210> 4954  
 <211> 435  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-016-Q1-E1-A2

<400> 4954

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 gccgaaccca ganaatgggt tcaactcattt gacttcactt gctcaatcag agaaggctgt 180  
 tcaggagctt cttcttcaac agactcctat gcaggctact gacgaccatc tcgttgagtt 240  
 ctctgaggct ttgagaactg ttgcaaaggc actaagggga gctgctgaag gaaaggcgtt 300  
 ggctcaagct gaggtgctg aatggaagcg tagatacgag ttatngaggt ctaataacgt 360  
 ggagttgcag cataaagaac tgtcaa atgg agtgtgtgcc gatgaatcta atgggtcaaa 420  
 ggatggagca ctan 435

<210> 4955  
 <211> 423  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-016-Q1-E1-A5

<400> 4955

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 tggcaataga tgattttgac acagccacca ttaaaacgat tttagacaag gcttcagagg 180  
 ttaaggcctt gctgaaatca ggggagagaa attatctacc ttttaaaggg aagtctatgt 240  
 ctatgatctt tgcaaaacct tccatgagga ctcggtttc gtttgagact ggttttttct 300  
 tgctcggtgg ccatgcgtta tatctaggtc ccaatgacat tcagatgggt aagcgggagg 360  
 gaaactcgtg atgttgctcg tgttcnttca cgctataatg acatcaataa ggggtccgtgt 420  
 att 423

<210> 4956  
 <211> 463  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-A6

<400> 4956

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aaggaaggga cggacacata tcagggcaaa gcgcaactag taagcaacat caacgcttgc 180  
actgctgttg gagatgtagt tcgaaccacg ctcgggccac gagggatgga caaactcatt 240  
cacgacgata aaggatccgt caccatttct aacgatgggt ctaccatcat gaagctcctc 300  
gacattgttc atcctgctgc taagatcctc gtcgatatcg ccaaatccca agactccgag 360  
gtgggtgatg ggacaactac agtggttctc ttgcagcaga gtttttgaan gaagcgaagc 420  
catttattga aggatggtgt tcacgctcag aatctaatta gga 463

<210> 4957  
<211> 447  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-A7

<400> 4957

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nnnnnnnnnn nnnnnnnnnn ctctctcgt ccagtattag ggttttaaag gcaagaacta 180  
ctagaacaag agaaggtaca aaaaaaaaaat gtcgggcctc catcgatcat caagtccatc 240  
gaagaacatc ggaaattgcc ttccctccaa agaactcctt gatgatcttg cagtcgattt 300  
gttttgaatg tcctgaaga agatnaacag tcattncaag aagaattttg gtttctgggt 360  
ggaagtaatg cttaantggt aactaangaa ngataatgct ggnaagaat gatncaanag 420  
cttaaagtcc ctgtcctttg aaaanaa 447

<210> 4958  
<211> 375  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-A8

<400> 4958

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tttgttttgc ctgagactag aggtttgtca tggatatana ttttcgacta cattcaggtg 180  
acctttgcaa aggagatgat gaggatanag gacttgataa tgtgttacac aatgaagaac 240  
atatggatat tggcanaatt gangatgttt ctgttgaggt taatactgat ganagtgtag 300  
gcatgggtgt tccaactggg gggatttggt tgagtacact gaagggtatg aatcntgaac 360  
ctcntaatgg tatgg 375

<210> 4959  
<211> 424  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-B1

<400> 4959

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tcgttgaagc gtgaatctgg aagtaagggt catcatggta atatccaagc ttccaaggct 180  
gttgctgata tcattcgtac aacattgggt cctcgttcta tgttgannat gcttcttgat 240  
gcnggtggag ggattgttgt tacantgatg ggaatgctat tcttcgtgag gctatatgtc 300  
gctcatcctg canntaaagt caatgattga gtntgagccg ttngcaagaa nntagaantt 360  
tgggttatgg ggacaaggnt cngtttagtg nttcaancct gggtgacaat gcttcacggt 420  
tgca 424

<210> 4960  
<211> 410  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-016-Q1-E1-B2

<400> 4960  
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 acccaggaaa caaccattct tccaggcagc agtttttcgac atggaagaat ggtattggag 180  
 attctaatat caatgtccag actcagcata gccttgaaag tactcagatg aaggagcaag 240  
 aaggatcgac tttagaaaat caacatcaac atgatttgaa acgcgcaa at gaacctcatt 300  
 tacaacacaa ccagcctcaa gacttcacg anctgggtcaa ctctggggag atccctcgca 360  
 agtccccaat caactggggt taccgattag tgaaaagaat cctactgggt 410

<210> 4961  
 <211> 469  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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<400> 4961  
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 nnnnnnnnaa tgaaagggtcc gtaaggggaa gaagacagat gattgcgaaa gagcaagacg 180  
 aatacaaatt acgccaacaa ggtcttggtt ttcaa atggc ttctcttttc ctctcttttcg 240  
 attactcctt actcttcttt tgggtgctct tccgcgtttt cttatacgag aatcacgaac 300  
 gaaaactcca gatcttctag cacacctctt ctctctgcat cgccatcttg ttttttcccc 360  
 caaattttcg attttttttt ttgtataact tttgagattc tgatagattc ggtacggagt 420  
 catgtatatg gagaattcnt ctgcttccga tgaatccatt gcctacgtt 469

<210> 4962  
 <211> 451  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-014-Q1-E1-H10

<400> 4962

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 tcgcttctct cctctaaggg cgggttcactc cgtttcatgt cgtctttatc aaccgcagct 180  
 atggcggaat cggngaaatc tcgttctagt tggattaagc aattgnatgc atctctagat 240  
 gaaatcgatc ctgaagttgc ggatattatc gaattanaga aggcnatata atggaangga 300  
 tttgaactta taccgtcaga gaanttcact tctctatctg tgatgcaagc cgttggttct 360  
 gttatnacta ataagtataa tgaaaggata cccggagcta gatataatgg ngggaatnga 420  
 gtncattgac atggctgana cattatgtca a 451

<210> 4963  
 <211> 484  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-014-Q1-E1-H2  
 <400> 4963

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 gtaaacaact ctttggttga gctgagtaat tacaaccaag aaaagagaag agtttgnccc 120  
 tgaatatgac aatgatgctg agcaactctt ggcgagatg gagttcaaag agaacgatac 180  
 tcctgaagaa catgaactga agctgcgtgt gttgcgtatc tattcaaaaa ggcttgatga 240  
 gaggaaacgt agaaaagaat tcataataga aagaaacctg ttgtacccaa atcccttga 300  
 gaangacctg tctcaggagg agaaagtaca atgccgacgt ttggacgttt ttatgcgttt 360  
 cattcanaag angagcacga cgagctactc cgtaatgttg taaaccaata ccgcatggtg 420  
 aaacgggtca aagatntcaa ngaaactcaa ttgcaagggtg tccttcaacg ggtgaaacaa 480  
 ataa 484

<210> 4964  
 <211> 462  
 <212> DNA  
 <213> Arabidopsis thaliana  
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 <223> Clone ID: LIB22-014-Q1-E1-H3

[illegible]

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<210>      4965
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<212>      DNA
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<223>      unsure at all n locations
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<400>      4965
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<212>      DNA
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<223>      unsure at all n locations
<223>      Clone ID: LIB22-014-Q1-E1-H7
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 ctttgcccat ggtgttggtt tataatcaag ctctcttgcg cgcattcttc gcattgcttg 180  
 gattccagta ctttccttta ctaccgaag caggttgctc attggacttt acttcatcta 240  
 acttcactct agtggcttcc gtatgctcga acaacaccga gagagctaaa tgctgccgct 300  
 acatgaatgc tttcgttgca atatctgtcg cccgctatgc aaactacaca gctgatcttg 360  
 gagttacatc agatttgact gaaatctgta tctactat ctctagaacc atggagcttt 420  
 atggaatccc aagaaatgct accatcttct gtggattagg gaccaagatt cttgttaact 480  
 atgattgtga gggctctg 497

<210> 4967  
 <211> 473  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-014-Q1-E1-H8

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 tccggcgaga agccggccgg agttaataga ttcgctcttc aatgtgctat cgctgcctcc 180  
 atcgtctcca tcatctttgg ttacgatact ggtgttatga gtggagcgat ggtgtttata 240  
 gaagaagatt tgaagacaaa cgacgttcaa atagaagttc tcaactgggaa ttctcaacct 300  
 tttgtgccct tgctcgattn attgctcgcc gggaagaacg tccggacaat aaaccgggac 360  
 cgggcgggta caacaaatcc gtccttnggc ctcaataaca attcaaggtt tagggccna 420  
 anaattgaan ggggttgggg gtccggaaat ttaccgggt tccccaaac ccg 473

<210> 4968  
 <211> 471  
 <212> DNA  
 <213> Arabidopsis thaliana

<223>        unsure at all n locations  
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<400>        4968

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cttgataacc tttcttcttc tttgaaatgg gttcttctgt ggagcagaac attcttgtta   180
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aggtttcgat catcgataat tttgataact ctgttatcga agctgttgat agagttaggy   300
agcttggttg tctgatctc tccaagaagc tcgacttcaa tctgggtgat ctaagaaaca   360
aaggggacat tgagaaacta atcctcaagc aaanatttga tccgtgaatc aatttgcggg   420
tcctaaaact gtggttaaga attgttgaaa cctccgcgca cttgacataa c           471
  
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<210>        4969  
 <211>        424  
 <212>        DNA  
 <213>        Arabidopsis thaliana

<223>        unsure at all n locations  
 <223>        Clone ID: LIB22-015-Q1-E1-A10

<400>        4969

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ttttttgtct agcaagtcac cgtattctac tttgttggtg caaatgggaa gttcatgttt   180
acctccaggg ttccggtttc atcctacgga tgaagaactc atcgaatatt acttgaaaag   240
aaaagtcgaa ggtctcgaga ttgagcttga agtcattccc gtcatcgatc tttatagttt   300
cgatccttgg gagttaccaa gacaagtcgt ttctcccaaa ccgggacatg gaatggtact   360
tcttctgctc aangggacaa aaaatatcct aatgggtttc gtacaaatcg aaggaacaaa   420
aggn                                             424
  
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<210>        4970  
 <211>        425  
 <212>        DNA  
 <213>        Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4970

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ggctgggaat ggctggtaaa gaggagactg atgtatctgc acaaggggtct ttaaccaggg  180
aggccactga gatatggagg agtgagttgg aatctcgccg gtttcaggta gatagtttag  240
aagctgaact tgtggatgtc aaggcttacc ttgagtttgg ctcagaagaa gatgccagaa  300
aggagttagg agttctttcg ggtaaggcca gatcgactgc aactatgttg cgttatttga  360
gatnaaaaag ctanaatcct tgggcaatcc tgatgatcta acaaatgtgt catgcngtgt  420
ggaaa                                             425
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<210> 4971  
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 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 4971

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tccaaagcca gaaccttggc tctaccaat atcggtttcc tctcgtcttc ttccaagtct  180
ctgaggtcgc ttactgccac cgtcgctgga aatggcgcca ctggatcctc ccttgccgct  240
cgcatggttt cttcgtctgc ggtcaaagcc cctgtttctc tcgattttga gacatctgtc  300
ttcaaaaang agaaagtttc tcttgctggt tacgaaagag tacattgtga gaaganggaa  360
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<210> 4972  
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 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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 atcagttgca gcacactcca cagcatttga taaggatatt gcaaataatt gttgatggtg 240  
 gctctgatct ttctgtacgc caatctgcta gtatccattt caagaatttc attgctaagc 300  
 actgggaacc tcattctggt gaccaagaac ataatcttgc caagtataa gaatgttgc 360  
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 ggaaga 426

<210> 4975  
 <211> 426  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 <400> 4975

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 caaatagacg aaaatgcccc tgtcggcgac ggcggatata agcaagacgg tgaagctgga 180  
 gaggtacaat agctacctcc ggaagattca cagcaccaaa gttctcaacg cttcttctaa 240  
 agttcttttc cgagcaacgc ttctcgtagc tcttgtctc gtctcatct tcgccatcaa 300  
 ctacctcca ctctccgata gccgcgccgc cgcagcacac canctccaac gtcgtagctt 360  
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 ggaaaa 426

<210> 4976  
 <211> 507  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-014-Q1-E1-H1  
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cgagaggagg aaactaggtt actttacttg cggaacagga aaccctatcg acgattgttg 180  
gcgatgtgac cccaattggc acaagaaccg taaacgccta gcggattgcg gtatcggatt 240  
tggaagaaac gcgatcgggtg gtcgtgatgg acgattctac gtagtcactg acccaagaga 300  
cgacaatccg gttaacccta gaccggggac tttacgtcac gccgtgattc aagaccgacc 360  
actatggatt cgttttcaaa cgtgacaagg tgattcaact aaaacaaaga gcctaacgtt 420  
aacaatttca aaacgatnca aggacctngc gcaaacttca acaatgctaa acggtgggtg 480  
catcaccaat caattttgtg acnaatg 507

<210> 4977  
<211> 436  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-013-Q1-E1-H12  
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gtttcatcgg taaacactac tttggcttca aagacatccc cacggcctct gctgactact 180  
ccaactttct ctaccaatgg gcctttgcaa tcgctgcggc tggaatcaca agtgggtcga 240  
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tttaccgggt cgtctctcac tggttctggt cagttgatgg atgggccagc ccgttccgta 360  
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aaaanggccg aggtat 436

<210> 4978  
<211> 515  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 4980

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gaagagggaa gtatcggatt tcgttgaagg acataagggt tacnatttac aggagacgag 360  
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aacttcgttt ctgggttttt atcagaaaac actctgtgac tattgtgtgg tgatcgagga 360  
aagaaaaaag atggttggtg gtggaacagg agagatgang gatcnatgcc natcaaaaa 420  
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<212> DNA  
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<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
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ggtaggaatc ctggtgctct tcctcgtctc ttattcaccg aagaagaagg gtgaccacga 240  
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ccgcnaggga taagggagtg ggaagcgaca agttcatttg aagcattcct caaccccggy 420  
agcttgtcct cctcaattcc tcaagaaaag aaaacaaccc ggggtgggtgg gnccattgaa 480  
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aacgttaaata taaagaactt aaattttggt angtttaaac caaagctcct ctctggcaa 420  
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nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn  240
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 caccatcgaa acaacaaaac gagcttaata atatacanna atccttctca aatctccaat 180  
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641630 "4993" 4993

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tcgagccgca aatgctcacg gtttcacacg tggtttacct gaaggttaca aaactccagt 360  
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 aacgctaaaa tccaggccaa gcaagatgga gatagagaga gatgatgggc aaatcaggtt 240

cgcagcagct gctgatggat gagaagatat atgttgagcgt ggggagtgac ttggggaaca 300  
 agtccactct tgtttgggag atacagaaca ctggaggcaa ggagttctgt atcgccaac 360  
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 <211> 443  
 <212> DNA  
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 agtacataga gtacaacaca aaaccgagaa tcgtccctga gaaaatcaat gttcacttag 180  
 ttctcactc acacgacgat gtaggttggc ttaagaccgt tgatcagtag tacgtaggct 240  
 ccaataactc cattagggga gcttgtgttc agaagtatt ggattctgta atcgcttcat 300  
 tgcttgatga tgaaaataga aagtttattt atgttgaaat ggctttcttt caaagatggg 360  
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<210> 5007  
 <211> 511  
 <212> DNA  
 <213> Arabidopsis thaliana  
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 <223> Clone ID: LIB22-013-Q1-E1-E2  
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 gacggacaca tctcagggca aagcgcaact agtaagcaac atcaacgctt gcactgctgt 180  
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taaaggatcc gtcaccattt ctaacgatgg tgctaccatc atgaagctcc tcgacattgt 300  
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atgggacaac tacagtgggtc ntccttgcan caaaattttt tgaaaggaac naaaccattt 420  
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<210> 5008  
<211> 505  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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tcgacgtcga cgattcatct ctagataatc caaatttcgg tcttttctt ctaaaattag 360  
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<210> 5009  
<211> 451  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-013-Q1-E1-E5

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ctctgccaga gatgtcactg ttcgttgaag agcaccagca tcgatgacaa cccaccttca 180  
tatacttcta gtcataatcc taagatttgc acaagatagt ttgagctctg tttcaaataa 240  
agaagctcat caaggatctg acgagaactc ctctggctcg tgtaatgtca gtcaaagctc 300  
tgaagctgac attgtcataa tgaaacaaga tgttccctcta gcaataatag tggaatcggg 360  
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gttcaaagat antctggggg atatacaagg a 451

<210> 5010  
<211> 505  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 5010

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nnnnnnncac cgtaaactt caatacccat ttgtcatttc ccccaaattc ctccgatttc 180  
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ttgcagttcg aaactcgagt tcaacttcaa tttgaggtag atttcgagaa aaagctgaag 300  
aatttcggaa caactaagat tttaacggtg gaattgggga gtcttgaagc ttatttttcc 360  
tcctgggtct cttttttctt atgtggtggt gcttgagagg gtttttgtat gatataaatg 420  
ctctagatca gagaaaaggn ctaacatgaa gttatcaaatt attccgcaac gctatgtaat 480  
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<210> 5011  
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<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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tgtcanttcc ttggaggaag ttatcaagca cttcctacat cttgctactg acaaagctga 240  
gcaagctcgg tctcaggcgg atgcccttga ggaggctctt gatgttgatg accttgannc 300  
tgataggaan cctgagggat ttacagccaa gttattgtcc anttggggaa aanggggaaa 360  
aagatanggt cngaaccggt tganttggtt ccaccccaaa ggggtttaaa gttncnggt 420  
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<210> 5012  
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<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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ttacatccgc catgccaaaca gggaatgtga gatccataaa agtcttgtgc atcaccacat 180  
tgttcggctt tgggataaat ttcatatcga catgcataca ttctgcaccg ttctggaata 240  
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agcaaggatt atcattgtgc anagatttca aggccttgta tatctgaaca aaaagtcaca 360  
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caaaagtaac tgattttggt ccaagcaaga t 451

<210> 5013  
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<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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gcggaagaatt tgattctact gggatgatgct ttatttcac agagagaaca ccggagagct 240  
attcatacgt acaagcaagc gttgcatcat tacacaagga ttccgaagca aagctccggt 300  
atttcgagga gttcattatc ttatctacc agatcatctg tgaatgcctc aagcatttct 360  
gctattaatg agaacgaggt gagattcaag attgcttcat ctactttgc tctaataaaa 420  
caaaagctgc aattgct 437

<210> 5014  
<211> 441  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-013-Q1-E1-F10  
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gctattggta gggttttata tgagcatcag ttgtttaaag aagctcttgt tagcttcaag 180  
agagcttgtg aattgcaacc gactgatgtg agacctcatt tcaaagctgg gaactgtctt 240  
tacgttttgg ggaaatgcaa agagtcgaaa gatgagtttt tggttggcgtt ggaagctgct 300  
gagtcgggcg ggaaccaatg ggcttatttg ctctctcaga ttatgtcaa tctcggtatc 360  
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ccaagtccta ancattttta a 441

<210> 5015  
<211> 436  
<212> DNA  
<213> Arabidopsis thaliana  
<223> Clone ID: LIB22-013-Q1-E1-F12  
<400> 5015

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cacaaaactt ctgtttccct gtttctccgg attctctccg gctctgagct ttcggtcttct 180  
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attgtatgaa cctttgactg ggatttttcc gaagaagaat cccagacgac gtaatttttc 300  
tccaagctat ggctgttgaa gagatggaga agaagatcaa aggaagccaa gagacgggag 360  
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<210> 5016  
<211> 456  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-013-Q1-E1-F3

<400> 5016

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cctccgccgg cgatttcgtc aaatccatta aaagtttcat tgtttcattc tgaacaatg 180  
caccagaccc ggaaaaagat tgtgctatgg ttcaggagtt cttttctaag atggaggctg 240  
ctttcagggc tcatccactt tggctcggtt gttctgagga ggaattggat agtgctggag 300  
atggcctgga gaagtatgtt atgacaaagc tatttactcg ggtgtttgct tcaaactctg 360  
angangttat aactgatgag aaactatttc anaagatgtc attgggtcaa caattcaatt 420  
ctcccagaaa nttgggtata caaccaactt tcaaaa 456

<210> 5017  
<211> 507  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-013-Q1-E1-F4

<400> 5017

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gttattgctc atgtcgacca cgggaaatcc actcttactg attctttggt tgctgctgct 240  
ggatcattg cccaagaggt tgctggtgat gttcgtatga ctgataccag agctgatgag 300  
gctgaacgtg gtatcactat caagtcact ggtatttctc tctactacga agatgactga 360  
tgaatccttg aagaatttca ctgggagcca agaagacgga aacgagtacc tcatcaatcc 420  
tgattcanct gggcacgttg acttttctc cgaagttact gctgctctcc gtatactgat 480  
ggtgctcctg tgggtggtcga ctgcant 507

<210> 5018  
<211> 507  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-013-Q1-E1-D7  
<400> 5018

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gtattcaata agtatggttg gggagtagct gcaaagatca cccaactgt tctgctattg 180  
actggtgttg cgttcttctc tctaataattg tttggcggcc cattcgcacc acttggttgc 240  
aagcttggtg tgacaccgct acttgcagct gtgtatgtcc gtgcccttca naatatectc 300  
agcaagaatg ccaagtacaa cttgttcnaa ccttgcaaag aaatnggcta tateccattg 360  
gatgaaggac accaagggtta aangcaaaac tgcgatgac gtggtctgca anccattaag 420  
gaaatcaagg gganccttaa tacancagtt caagatenta ncctttgggt taccaaccaa 480  
atcaaagccc tatectagga atgntct 507

<210> 5019  
<211> 455  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations

<223> Clone ID: LIB22-012-Q1-E1-C3

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ctcttgcnct acgaatacat gtctcgggga agccttggcg agttacttca cggcgggaaa 180  
tcacatagca tggattggcc aactcgggtt gctatcgac tcggtgcagc ggaaggtctc 240  
gcttacttac atcatgattg taaaccaaga atcattcacc gtgacatcaa atcgaataac 300  
attctcatcg atgaagaatt tcgaagccca tgttgggaga attccgggtt aacaaaagtc 360  
atccgacatg ccaactatca aaatccgttc tcaanccgtt tgctggattc taacggttaa 420  
atcgctcccg antttgcatn cacaatgaaa gttac 455

<210> 5020

<211> 408

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-012-Q1-E1-C4

<400> 5020

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attgcttgct tgctatggaa ttgggtaaat ctcgattcta cttatgttgc aattgcnttt 180  
ctctggtag attttccgat ttttccttaa ctggnagtga ttnaccaaga agccatcccc 240  
aacaatttca attggnatcc taaaccttcc tcctgaagat tcctcgtaat tcccnattcg 300  
atgtttaana acttnaaatt cccctccaaa tcctgaaacg aatttctccc aaaaatctcn 360  
gnttcctcaa aaaaaaacia aaaaacaatg ttgtgtgcat canctcg 408

<210> 5021

<211> 494

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-012-Q1-E1-C6

<400> 5021

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tcaaagatec gatctcagag ctttcattgt ttaccccccang gggngcttnt ctttgtgttt 180

tgtgttgtca acttaataca ttatatagat cgaggagcta tagcaagtaa tggatatcaat 240

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atttcaactt gagcaatttt gaagatggag ttctgtcatc tgctttcatg gttgggcttc 360

ttgttgctc tcttatattt gcttccttag ctaanagtgt taatccgttt aaacttancg 420

gagttggggt gtcaatctgg actctcgtg tgattggctg cngtcnttcn tttgattttt 480

ggcccatcac aatc 494

<210> 5022

<211> 481

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-012-Q1-E1-C8

<400> 5022

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tatataatat ttgatagaaa aaaaangnng attcgtataa catcatcaga gataatcnca 180

aatacacttc ttctttctct cgaaatctca gccgttcgtt tgtgtttcat tggctctcaa 240

tcgaagaaaa ctttttagctt acaaaatctg ctttgagtag tattgatttt tcaattcata 300

tggaaaatcc tccattagaa tctgagatca aagaggatat gtctttgaag aatcatcctc 360

cagacnagga taangacaaa tacactatca tggaacaacc tagtantcca cgcatcgga 420

aggttggtgc tagatgggta cctgatgaag cacagangcc aattatcaat gacgctcccg 480

t 481

<210> 5023

<211> 427

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-012-Q1-E1-C9.

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atggctaatac agaaacctca agtctacatt ccagctaacc gtccggttta ccgtccacag 240  
ccttacagtc gccgtcatca ccaccaatct cgaccaagct gccgacgaat ttgctgttgt 300  
tgctgtttct ggctgattct gataattctg atcttagctc tcatgactgc aatcgccgcc 360  
aacgcgatgt acgtgattta acaacctcgt ccgccgtcgt tctccgtccg tcaataagaa 420  
tcaancg 427

<210> 5024  
<211> 432  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
<223> Clone ID: LIB22-012-Q1-E1-D1

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cattgttggt tggtgcagca gcaaagaaat ggagtttgca tcagttggat atatcgaatg 240  
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ctaaagaagg cgagactctt ccaacctaaa tgcagtctgt taagtttcca aaatcccccn 360  
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taagaatnca aa 432

<210> 5025  
<211> 476  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-012-Q1-E1-D11

<400> 5025

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atgatcactc ctgtttacgc tctgtctgct cccgagcttt atacgagggg ctgaagggtcg  180
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ggacagacct tccacctcga cttcaccaaa ggtttccaat gcccatattg tttggtgggtg  300
atggcagtta catggctcct ttctcacttc aaaatgacaa cattcttacc agtctgatga  360
gtcagcttgg ttgcctact acttggtata anactggtgg ctggtgtaaa tgctcaatta  420
actcttgtn c ncttggcgtc tgagattaac attcaatccg gttctganaa tggggtt   476
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<210> 5026

<211> 505

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-012-Q1-E1-D2

<400> 5026

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tcgtgaaaac actcactggc aagactatca ctctcgaggt nggggagcnn tgacaccatc  180
gacaatgtta aggcaaagat tcaggacaag gaaggcattc ctccggatna gcaaagatta  240
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gaatcaacct ttcatgttgg tntccgttta aaangtngna tngaaatcct tgtcaaagac  360
tntgaatggn aaaaccatta atttgggang ttnagaactc tgacactatt gacaacgtna  420
aaagcaaaga ttcaaggcaa ngnaaggatc cctncggggtt aagcaanana cttacttttg  480
ccggttagca acttttaaga cngga   505
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<210> 5027

<211> 483

<212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 aacaagggaa acggagaatg aatcctagga caagtttggc tcagcgtgaa gagatcataa 180  
 gaagaactgt ctatgtgtct gatattgacc aacaggtcac tgaggagcag cttgctgggt 240  
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 ctgggacgat gcttggattc catcctgtga aagttatgcc gtctaagaca tctattgcan 420  
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 cgccgctgat tcagctgccg ccgacaaagg aatatggaag aaaaagatgt gtatacgcaa 180  
 gatggaactg ttgatattca caaaaatcct gcaaacaagg agaaaaccgg aaattggaaa 240  
 gcttgccgct tcattctcgg aaatgagtgc tgtgaaagat tggcctacta tggcatgggc 300  
 actaaccttg tgaattatct tgagagccgt ctgaatcaag gcaatgctac ggctgcaa 360  
 aacgtcacga attggtctgg aacatgttat ataactcctt tgattggagc cnttaaaact 420  
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 gactct 486



<210> 5029  
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 <212> DNA  
 <213> Arabidopsis thaliana  
  
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ttttgaggga gaggattccc ctgaaagaag anggntggg ncggttattg gtgtgaaaga  180
ctgctccct cactggaaag actcaaatg gcgatgctta gaagttcatt gggatgagcc  240
tgcacgatt tcaagaccca ataaggtttc accatgggaa attgaaccgt ttgtnaattc  300
agaaaacggt cccaaatcag ttatgctgaa aaacaaaagg ncccgtaag ttaatgaagt  360
atctgcactt gatgtngca taacagcttn aaaccttgg ngctctgttt tgncgcaaac  420
ccatgagttt gcacaatcgt gnatcaactc acagtggngt tctcctcaac aatgttatcn  480
tgatgcaa                                         488
  
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<210> 5030  
 <211> 498  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
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ctttcaaact ttctctcatc ttcttctta atattttcat cgtagccacc atcgagccg  120
cagcggccgt taacgccgt accaaagggt nggattctcg gccgtccaaa accaggcgctc  180
cctggccttt caagaagctc aacaaaccgg tggttttaat gatctcttgc gacggtttcc  240
ggtttggtta ccaatttaaa acggacacac caaacatcga ctttctcata tccggaggaa  300
ctgaggccaa acacggttta atcccgggtt tccccacaa tgacattcca aaacaactac  360
tctatcgcaa acnggactcc naccgggtta acaacgggta taatcatgaa caaagtttaa  420
  
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<211> 502  
<212> DNA  
<213> Arabidopsis thaliana  
  
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<223> Clone ID: LIB22-012-Q1-E1-E7  
  
<400> 5031

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gaggtgcagt tgaatcagca ttgtctgtgt anctggagca ccttgctaca accttgggct 180  
ctcgcgaaca attggccatc gctgaatttg ctgatgcgt attgattata ccaaagggtgc 240  
ttgcagtaaa cgctgctaag gatgcaaccg aattggtagc taaactaaga gcgtaccacc 300  
acactgcaca aaccaaggct gataagaagc actattcaag catgggactt gacctcggtta 360  
aacnggaaca tccgcaacaa ttttgaacc tggattgatn cgaaccaagc tatgaaccaa 420  
anttgaaaat tancantttg caacaagaag ggaanccatt aacnaattcc aacnaantt 480  
acaacatgat ttaaaactgg tg 502

<210> 5032  
<211> 479  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-012-Q1-E1-C11  
  
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tgattgtttt tcccactttg catctgtttt gnggatgcc a gctacggatt ttcaaggatc 180  
atttgaagg tcgttgctaa gtttacggcg agaccaagtt gactcatcaa cagtcgtctc 240  
cggaagtagt agccaccacg agccaagcac catggaggtt gagctagatt cgtttcaaag 300





nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 300  
 ntgaaactttt gggagcatcc ggtaacgntt gggtcngggtt cacnaccttc cccaaagaat 360  
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<210> 5037  
 <211> 441  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-012-Q1-E1-A6  
 <400> 5037

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 nnnnnnnnttt caccgggtgcc gacgccgata ccgtcacttc ctgatgattt gcttgtaagt 180  
 atcttcgcac gagtctccag attgtattat ccgattctct ctcttgtctc caagagcttt 240  
 agatctctcc tccgttcacc ggagctttac gagacacggg cactattagg ccgaaccgag 300  
 agttgtctgt atttgtgttt acaggaggga aatcctgatn cgaancctct ctgggttact 360  
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<210> 5038  
 <211> 447  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-012-Q1-E1-A8  
 <400> 5038

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 ggacaagata tcgctactca gtttaaccac accaatggac tctctctgat ttcaagagca 180  
 catcaacttg tcatggaagg ttttaattgg tgccaagaaa agaacgttgt gactgtattt 240

agtgccecaa actattgcta cegttgtggc aacatggctg cgattctaga gatcgggtgag 300  
 aacatggacc aaaatttctt tcagtttgat ccaactccac gtcaagtcga acccgaaacc 360  
 actcgcaaga ctccagatta ttttttgtaa gtaccaaag aactaaagct gcaattccac 420  
 acactagctc ttcgtctctt ttgcttc 447

<210> 5039  
 <211> 436  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-012-Q1-E1-A9  
  
 <400> 5039

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 aaaaccacca catcaccacc gagaccagcc gtagcgactc ggaggttgag agaattctacg 180  
 aagcgtggat ggtggaacac gggaagaaga agatgaatca aaacggtctt ggtgcagaga 240  
 aagatcaaag attcgagatc tttaaagata atcttcgttt catcgatgaa cataacacca 300  
 aaaacctcag ttataaactt ggtttaacct ggtttgctga tttaaccaat gaggagtacc 360  
 gatctaagtt acttggggct aaancgacca aagaaggttt gaaaaccaat gattcgggtat 420  
 caagcctgt tgggtga 436

<210> 5040  
 <211> 483  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
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 <400> 5040

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 gggtgggtca gtcccaggtc acaaagagtt ggggtgaagaa agtccagcaa gaatggagca 180  
 atttggaggc aaatcttccg aacacgatat atgtgcgtgt gtgtgaagaa aggatggacc 240

ttctgctgc agccctgggt ggtgcccctg gaacgccata tcacgatggg cttttctttt 300  
 tcgacataat gcttccacct caatatectc atgagccacc aatggtacat tatcattcag 360  
 gtgggatgcg actgaatccg aacctgtatg agtcaggaag aatttgcttg agtctgctga 420  
 atacatggag tggctctggc actgaantat ggaacgcagg gagctcctcc atccttcaac 480  
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<210> 5041  
 <211> 448  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 5041

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 acggatgctc catctgaagg aggtgaaggc tctgggtctc gtgaagctgg tccagtctca 180  
 ggtggtggac gtggttcaca gcgaggtggt ttccagcagg gaggaggaca acaccaaggt 240  
 ggaaggggtt atactcctca acctcaacag ggaggtcgtg gtggtcgtgg atatgggcaa 300  
 ccaccacaac agcaacaaca gtatggagga ccacaagaag taaaaaggaa gaggaagaag 360  
 gaggactcct catcaaggga ggtcaagaag gttatgccgt tggcnttga ggttggnctt 420  
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<210> 5042  
 <211> 480  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 5042

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 agaatctcag ttaccggctt ggnttgaatc ggtttgcgga tttatctctc catgaatagc 180

gagaaatttg ccatggggct gatccaagac ctctaggaa ccacgtcttc atgactagca 240  
gcaaccgata caagactagt gatggtgatg ttcttcctaa gtccgttgac tggagaaacg 300  
aaggcgcagt gactgaagtc aaagatcaag gccttttgca ggagttgttg gggccttctc 360  
cactgtggga acaatgggaa ggcttaacaa gaattgtgac tgggagaacc taataacttt 420  
tgtcctganc aagaatttga ttaaattgtt acaanngaaa acaaatgggt nccggaggag 480

<210> 5043  
<211> 470  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 5043

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tgctatacga gacagcggcg gggtttgccc tctttaaagt taaagatgaa ggaaagatgg 180  
ctaacgtcga ggatttgtgt aaagagttcg acactccaga ctcagcacga aagatggtta 240  
agctaaaagc ttttgagaag tttgacaata catctgaagc tctcgaagct gtggctaaat 300  
tgctggaggg agctccaagc aaaggtctgc gcaagttttt gaaagcta atgtcaagggtg 360  
aaaccttggc tgtggctgat tcaaagcttg ggaatgttat caaggagaa actgaaaatt 420  
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<210> 5044  
<211> 454  
<212> DNA  
<213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 5044

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cgaagcta atgatcaagtc cacttcaaga cttttgtgtg gccattggcg acctcaaaaa 180



tggtgttttt gtgaatggta agttttgcaa ggatccaaag caagcaaagg cagaagattt 240  
 cttttactca ggcctcaacc aagcaggaac cactaataat aaagtcaaat ccaacgtgac 300  
 aacagtcaat gtcgatnaag atccaagggt taaacacttg ggaaaaaccc ttggccgcat 360  
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<210> 5045  
 <211> 487  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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 acacggcgaa gaagatttca ccatattttg tctaagtgga ttcngttgag agagagagat 180  
 ggctatgtct caggtggtga acacgtaccc gctttcgaac tacagcttcg gaactaagga 240  
 acccaagctg gaaaaggaca cctccgtcgc cgaccggctc gctcgtatga aaatcaacta 300  
 tatgaaagag ggcattgagga ctacggttga agggattcta ctggtgcaag aacacaacca 360  
 tctcatata cttctgctac aaattggtaa cacattctgc aaacttcaag tggacgctg 420  
 aagcctggtg aaatgaactg atggtctgaa aagaaactga caattaactt ggagggaatt 480  
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<210> 5046  
 <211> 686  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
 <223> Clone ID: LIB22-011-Q1-K1-H8

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tctctcccta aggaccaata aataaactga cgaagtttgg gccccagcat tcaaatactc 180  
 tcccgtctctg ctcccgaata tttttttaag cagacttaat actacctaca ctctctctct 240  
 cactctcgta caagtcacgg agtgacgctg gtgcgtacta acggtccacg tagagttgctg 300  
 annnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nntaacggaa 360  
 accgttagtc gtcggaccta cgtcttctgg tcatcgaccg cgctctcggc ccacatcgctg 420  
 gagatcgctt cgttgccgga agaagcaaata ttgctcgat aagagttaag ttataagctt 480  
 aatccttacc actaacggac cgttccccaa taagcacata cgggcgacga tctacaacgt 540  
 tcccagtaac gtaaacgttt atccccgnta ggccgana ngacataccc cataactaag 600  
 aagacttcac catcnactag ncttaaaacg gagccanang gtcaagtcgg acacgnacga 660  
 tccnataacg gacactcggt cccgtt 686

<210> 5047  
 <211> 635  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 caatcttctg ntcacccgat aacatgaatt tcacattcaa atccttnaca atccgtaacc 180  
 tcacattcct cggagattca catctccgaa acggtgtcgt tgggctcaca agagagctag 240  
 gtgttcccga tacaagctcc ggtacagtaa tctacaacaa tccgatccgt ttctacgac 300  
 cggattcaaa caccacggcg tctttctcca ctacttctc cttcacggtt caaaacttaa 360  
 acccagatcc aacctccgnc ggtgacggac tcgctttctt cctctctcac gacaacgata 420  
 ctttaggaag tcccgggtgt tacttaggtc tcgtcaattc ctctcagccg atgaagaatc 480  
 gattcggcgn tatcgaatcg atacgaaant ggatcctcan ttcaacgac ccaatggnaa 540  
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 tggnttaaaa tgganctcaa atctgggaaa tngat 635

<210> 5048  
 <211> 686  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-011-Q1-K1-G5  
  
 <400> 5048

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 ggataatccc gacggattcg tagccggaga agctgtagcc gaagtttaac cacacgagga 180  
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 caacgctagg agtaccgagt gcgtagccga gcccgctacct tgggctgaag aagacctcgc 300  
 ccggagttaa gctgtcaagg tgtaatctag ggaaggatca gctagcgacg taaccgagct 360  
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 aaggccgaca gcgagtctac tcacgtacac gtaaagaccg actggccagg cgagaccgaa 540  
 gaacctacct cgacgttaaa tgccgtcaac tcataatacg gccggcgact gctcgcacga 600  
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<210> 5049  
 <211> 684  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
 <223> Clone ID: LIB22-011-Q1-K1-G6  
  
 <400> 5049

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 ccttggggna aataataacg gccggactcc cggaactcga ctaaactctc ctaacgggta 180  
 ttccaactga aaaatctgat actccactcg atgacctga cttaattgtt gcagctattg 240

aattgccatt cttcttggca atcaacggaa ctggagtcga caaaggagga ggaggaggag 300  
aaagagagac ggcctctggc aggaacacat atataatgct atctgtcgca atggaattgg 360  
aggccaatga cgaacctatt ggagacaaaag aagtccacac ggtcagcgcc tccgtctgcc 420  
attggaaaat cccggccgaa tgaattaaaa attaccagg ccacttccac aatccggacc 480  
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ccaccgaaag caatcacggc gcatacttaa gattccccga aaccggcgcg ccggaccggc 600  
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<210> 5050  
<211> 674  
<212> DNA  
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<400> 5050

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gcctctgtcc tcttctctc tgatcctgaa ggccctgacg tcgaagatga tgacgcccta 180  
gaagacctta tcgagtccta ttatctctct tgcttcttct cctcgatcta gctcgagcta 240  
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gttcttctct tcgttgactt atagatgttg gactccgagc tcgtcctaga aatcttagac 480  
atcgatacct tgaagaagac gtaactgcat atcgcggaga ctgcccgtgc tctcacaccg 540  
acggccatgt cactaaccat cctatcggca aatgcgaaaa cgagaattct gtccccgtcc 600  
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<210> 5051  
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<400> 5054

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gaattgaaac agagagtagt tgggtcggaa tagctttcaa cactgtagca tttgtagcat 180  
tgtcttttgt aatgtattct ctgattctcc atggaagaag gttggtccaa tcgcagaaat 240  
gcttgagttt gagtgtttca gtgcaaaatg catttgtttt gtccaattcc ttctcttctg 300  
ctagagctgc tgatgtgagc attagagatg gtcgaaaagg gaagaacttt acagtctctt 360  
acctcgttga ttcattgggt ttatctaaaa agctcgcttg aatccatctc aaggaaaagt 420  
agctttgagg acaagggcaa tcttgattct gntctaaagt ctggttaaga agttaccggn 480  
tcacagatcc tcagatctct accatcantt ccngattatn ccgntattgc ntggaancag 540  
atgcctaaga aaagcctttt ggtccccaag ccttcaaaaa tctgcaatct aaaangaacc 600  
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<210> 5055

<211> 693

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-011-Q1-K1-H7

<400> 5055

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ggcggctaaa tttctacaat tgngantgtg tccgagcccg atnaagttca ttacaaggnt 540  
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<210> 5057  
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 ggtcatnagg accgggtccg attttggaca ctccatccgc aggaatttta aagttttccg 600  
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<210> 5058  
 <211> 670  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 aagtagagaa tactgcgcgg tatgagagcc tgacacgtag acgtgataga taataatcct 420  
 cctaataaaa gggccgcgct gcccgacta tcggctctag cggcctaggg aaaagtatcg 480  
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<210> 5059  
 <211> 671  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
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 <213> Arabidopsis thaliana  
  
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gttattanag ggctcacgct atttgcagct tcagaatcca caggattgaa ccttncaggt  180
gataagatag ntgggtctggc caaattcttt ctgggtgttg gaattcctgg tgatgccaa  240
  
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<210> 5061  
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<213> Arabidopsis thaliana

<223> unsure at all n locations  
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tggaagaag gttccgatca tggcgctcgg gtcgctcgtc gatcaaggac ctaagacnnn 180  
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ccaaaaccag aacaagaagg gaaaacaagt ttatctagga gcatatgatg atgaagaggc 480  
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<210> 5062  
<211> 623  
<212> DNA



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nagaangtta agtcgaaccg agaaaaaaga acntaggaag cgtatccnca gagcactgcg 600  
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<210> 5064  
<211> 693  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<210> 5065  
<211> 632  
<212> DNA  
<213> Arabidopsis thaliana  
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694

<210> 5067  
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<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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<210> 5068  
<211> 630  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
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anaaggtgaa ggaacccaag gttgatantg agctcatcta tgcatatgca aatattgatc 540  
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<210> 5069  
<211> 691  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<210> 5070  
<211> 664  
<212> DNA



<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-011-Q1-E1-H12

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<210> 5071

<211> 698

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-011-Q1-E1-H4

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<210> 5072  
<211> 636  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<210> 5073  
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<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 5073

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<211> 670

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-011-Q1-K1-A10

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<211> 667  
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<210> 5076  
<211> 633  
<212> DNA  
<213> Arabidopsis thaliana  
  
<223> unsure at all n locations  
<223> Clone ID: LIB22-011-Q1-E1-C8  
  
<400> 5076

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tacgtggatg ccgtagcctcg gaagaaacga aatgggttcc agtgaccaa ctatgtcntc 180  
tagtggctga caataanata tcgaanctag agcagatcta tcttcattct ctcccantan 240  
acgagtacca aatcatacat catcttggtg gtcctacgtt ganangacga cgttatgaan 300  
atcatgcctg ttcanaaaca naccatagct ggtcaaata ctagattcaa tgcctttggt 360  
gttgttggtg atggaaatgg tcatgttggt ttgggtntca agtgttctaa ggaatttgct 420  
antgccatta nacgagctat taatcctgct aagctatcan tgggtcccgt gangataggt 480  
tattngggga ataagattgg gaanccacac actgtgcctt gtaaagggtac tggggaaatg 540  
ttggtctggt actgttagaa tgggtcctgcc ccgataggct tgggtattggt ccgcaanggt 600  
cctaaagaag gtctcaatcc ccgnaatga tta 633

<210> 5077  
<211> 428  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 5077

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agcggcttct ttgttgggga agctcgtcgc acaaccaatg catgggccta gagttgctat 180  
cacacttggt agattccttc ctgacgggtct tgtatctata attcgtgatg gacctgggga 240  
ggctgttggt catgcacttg agcggaccac tgagactcca gaacttgtgt ggacaccagc 300  
aatggcagca tctttatccg cacagattgc aaccatggca tcagatattt atcgtgaaca 360  
acagaagggt tctgttattg aatgggatgt accagaacaa tcantggtca acaagaaatg 420  
anagacaa 428

<210> 5078  
<211> 443  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
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<400> 5078

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ctttcaccac taaatcagct tccttcaatc actgtggttg ctttggaacc agtttctgat 180  
ttagcgacta gggttttgat tggaaccgta ttaagtatat gagaatcggg ttttactggt 240  
gaatcggatt atcatcgga ttcggaaaaa gatggatcgg aatcaaaaga tggatcacgt 300  
tatcggcggg gaagttaaag ttgggtagga agcttggaag tggatcattc ggtgaacttt 360  
atttagggat caatattcaa actggagaag aagtcgcagt taagctggaa cctgtgaaga 420  
cgangcatcc tcaactgcag tat 443

<210> 5079

<211> 498

<212> DNA

<213> Arabidopsis thaliana

<223> unsure at all n locations

<223> Clone ID: LIB22-010-Q1-E1-H10

<400> 5079

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ttcttcactc gaattgtatc tatcatccat ggcttccgag aatcntttcc gaagcatatt 180  
gaaggcggtta gagaancctg atgggtggtga attcggtaac tactacagct tacctgcttt 240  
gaangatccc aggatnnata aactacctta ttccattagg atagttcttg aatctgccat 300  
acgtaactgt gatgagttcc aagttaagan canagatggt gagaagattc ttgattggga 360  
gaatacttct cccaagcagg ttgagattcc gttcaancct gctcgggttc ttcttcagga 420  
ctttacnggn gttcngcng ttgttgatct tgcttgcattg aaaaatgcca tgagaaaatc 480  
ccggtgggaa tccaanaa 498

<210> 5080

<211> 454

<212> DNA

<213> Arabidopsis thaliana

<223>        unsure at all n locations  
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 ggtgtttctta aggggaaaga tcagaaacct cttggatcta ttcacgttcc ttctcctaata 120  
 ttcgatattgg tttactctgt gttatctcaa cgaggctatt accctgactc acctgataag 180  
 gagaatcaag acacttactg catcaaaaaca gagcttcaag gtaacccgaa tgttcatttc 240  
 ttcggtgtct ttgatgggtca cgggtgtgttg ggtacgcant gttcgaattt tgttaaggag 300  
 aagggttggtg aaatgttggtc cgaaagaacc aactccgcct naagattcgg agaaagctta 360  
 aaagtccgcc tttttgaagg ttaatgaana attacacat antgaaatcn acnattccat 420  
 gaatggnact actggcaata cggctctgtt gttg                                        454

<210>        5081  
 <211>        454  
 <212>        DNA  
 <213>        Arabidopsis thaliana

<223>        unsure at all n locations  
 <223>        Clone ID: LIB22-010-Q1-E1-H2  
  
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 agaaaatgaa cccctttgca gagcaagaag cttgggagga ccatcagatt gaaaacgcag 120  
 cattaaaatt tggtgcaaag aataaggagg tctcagacaa ttacgagttt gtatttgaag 180  
 accaaataga cttcataaag gcattctgtg tggctggtga taattatgaa gatgaaatgc 240  
 atgctaaacc atctcaagat tctgctggga aatcggcttt tcatatgctt caggaggata 300  
 gaaaagctct gccaatattat acatatcgtg atcaacttct taatgctgtg aaagatcatc 360  
 aggttcttat cattgtgggg gaacgggttc tggcaagact acacagatac cccaatatct 420  
 tcacgaagct gggtacacaa agcttggaag nggt                                        454

<210>        5082  
 <211>        436  
 <212>        DNA  
 <213>        Arabidopsis thaliana

<223> unsure at all n locations  
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 ccanctttct atgacaatac atgtcnaagc gtcttttanca tcgtacggga naccatagta 180  
 aacgagctaa gatcggtatc tcgtatcgct gcaagcatcn ttctgtcttca cttccacgac 240  
 tgtttctgtca atggctgtga tgcactnate ctgttagaca acacaacatc ctttcgaaca 300  
 gagaaagatg cngctccaaa cncanactcg gntcggangat ttncagtgat cgatagaatg 360  
 aaagcatcag tagagacagc atgtccaang actgtttcat gcgcagatat acttaccatc 420  
 gcagctcaan aagctg 436

<210> 5083  
 <211> 485  
 <212> DNA  
 <213> Arabidopsis thaliana

<223> unsure at all n locations  
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<400> 5083

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 tctctgattt gttttgcttc gatcaaagac tgatcaagag gatacctttc cagattttgt 180  
 gtcataatgt gtgaatttgc agcaggagcc agatgaagtc tttagtattg gagctttctca 240  
 attggatttg tctcgtata atggagtgtt gtcgctagag ccagaacagg tgggggcaaca 300  
 agattgnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 360  
 nnnnnnnnnn nnnnnnnnnn nnnnnnnnga cgattgctcc agaaagcggg caaggactgg 420  
 gatcgtgtan cagaggagga ggaactaaag cgtgtcntga aaaggttgaa ggagggagaa 480  
 gctaa 485

<210> 5084  
 <211> 686  
 <212> DNA



<213>      *Arabidopsis thaliana*

<223>      unsure at all n locations

<223>      Clone ID: LIB22-011-Q1-E1-A1

<400>      5084

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acgcgtccgc aagggcagtt ttttcttgat attcctttca actttcctga gtatgtgact 120

cctgcggngg nagaaaaatct caaaangaga aaagatttac ttgagtgtta atgctggtac 180

tggaacagaa gttctctgca aaggatgcag tcatcaacta aaggagaaat tgcggagtgc 240

aggggaagttg aggtttgcat atgaagcaga tgttttgaag tggtcgaaca ctgactttag 300

cttttcttat acggcctcct caagtaatat agttggtgga cttttccttc aatctgcgcc 360

tgttcacgat gttgatcaga gggacatatt ttctttctat ctttttccag gaaagcagca 420

gaaaactaag gcattcaagc gggaggtagt atttgttggt gacataagta aaagtatgac 480

tggnaaacct ctcnaggatg taaaaaatgc gatatctaca gctctatcta agcttgatnc 540

tggagattct ttcaatatta tcaactttcag caatgatact gctctatttt cgacatcaat 600

ggagtcagtc acttctgatg ctggtgaaag angcattgag tggatgaaca agaactttgt 660

cgtcgcagat ggtacaaaca tgctcc 686

<210>      5085

<211>      612

<212>      DNA

<213>      *Arabidopsis thaliana*

<223>      unsure at all n locations

<223>      Clone ID: LIB22-011-Q1-E1-A9

<400>      5085

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tcggtggana tctttttctc ccgtaacaac gctcttctcg caagctcgaa aatgaaaata 180

ctccagagaa ttgcttactt aaacgtcngt atctacccgt tcacatcgat cttcctcatc 240

gtatactggt tctaccagc gctctccctc ttctctggtc agttcatcgt ccagacgctc 300

aacgtcactt tctagtcta ctttctcatc atctccatca ctctctgctt actggccctc 360

ctcgagatca aatggtcagg aatctcactc naggaatggt ggataaacga ncagtttttg 420  
ctcattggag gaacaagtgc tcatctcgca nctgtgcttc aaggtttgct caaagttgta 480  
ncangagtcc aaatctcctt cangtctcag aataaatccg ganganatga tatataccac 540  
aatttccgga tttgtacatg ggngaaaatg gganttttaac tttatgattc ctcccgaatt 600  
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<210> 5086  
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<213> Arabidopsis thaliana  
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<223> Clone ID: LIB22-011-Q1-E1-B11  
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tggaagaag gttccgatca tggngtcggt gtcgtcgctn gatcaaggac ctaagacaga 180  
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agcgtattag taanatgcct ccgtgcactg ctgggaaaag gagttccata taccggggag 360  
tcaccagaca tagatggaca ggtcgttatg aagctcacct ttgggataag agtacctgga 420  
ancaaaacca gancaagaat ggaaancaaag ttnatctatg agcatatgan gatnaanang 480  
ctgctgctag aacttacaac cttgctgcct taaaatattg gggctctggg acacttataa 540  
atcttccggn gactgattaa ancaanggat tnanaagaaa tgcanatctc tnaagggaat 600  
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gtga 664

<210> 5087  
<211> 666  
<212> DNA  
<213> Arabidopsis thaliana  
<223> unsure at all n locations  
<223> Clone ID: LIB22-011-Q1-E1-B3

1. The first step is to identify the problem. This involves understanding the current situation and what needs to be changed.

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<210>      5088
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<212>      DNA
<213>      Arabidopsis thaliana

<223>      unsure at all n locations
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<400>      5088
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2487

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 gagagcctct cagaagaaga gattgcgggg ttaagagcaa tgtttgaggc aatggatact 180  
 gataacagcg gtgcaatcac ttttgatgaa ctcaaagctg gcttgagaag atatggatca 240  
 accttgaaag acaccgagat ccgagatctt atggaagcgg ctgatgtgga caacagcggg 300  
 acaatagatt acagcgagtt tattgcagcg acgattcatc tgaataaact agagagagaa 360  
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 <211> 437  
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 gacctacacg agattcgata ccgtatttct cttttctagg ttcgccggcg ctaagtattc 180  
 gccgttattg ccgtctccgt cgtttacttt atctacttcc ggcattcata tcagaaccaa 240  
 accgaattct cgttttcact cgattatagc atcctcctca tcttcatctg tagtcgccgg 300  
 aactgatagc attgagatta aatcgttgcc gacgaagcct attgaangga caaaagactg 360  
 ggaactaacg gactccggga agaaggggtga aaagttttca tgggaagata antaatttag 420  
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<210> 5091  
 <211> 424  
 <212> DNA  
 <213> Arabidopsis thaliana  
  
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 nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnngct ttggtcaaac 180  
 ctgaatccga gacacgaaag ggcctttact tcttgctgaa tcttgaccag aacatcgccg 240  
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 aagtgatcaa gaaagctctg agtcaagttc ttgttcatta ctatcctctc gctggacgcc 360  
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 <212> DNA  
 <213> Arabidopsis thaliana  
  
 <223> unsure at all n locations  
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 ttcaatccaa gtgttttgcc ctgacatgtt tccgaanaaa cttcgaantc aatcaaccaa 420  
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 <213> Arabidopsis thaliana  
  
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 atgtcaatca tctcctacga cgaaaaccac cacatcacca ccgagaccag ccgtagcgac 180  
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 gaattaanca atgaaggagt acgattcaag ttacctgggg gcaaaacgaa caaagaaggg 420  
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481

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ccggagaggt ctacaagcac gtgagactgc tcatgcgggtt tgtcttggag cctcgttagc  180
gcttcgtgga taatgttcat tcatcactcg tgtcaatgtc ggtacacggt ttttatgttt  240
gtaatgttaa ggtgtcggta tacattagtc agtcatacta agccatacga taataagaga  300
tgnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn  360
nnnnnnnnnn nnnnnntggt tgaacaaaaa aaaaaaaaaa gggnnngncgc cccaaangat  420
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tctcaagcag ataaagttga tcggatacta gaatgggagg aggatttaga gttttgcatt  180
tggtgaggcc attcttggtt tttctgcctg aggttcagag tgctgatagg aaggttccat  240
tcagagagaa ggttatctac actgtcatct ctctcttcat ctttcttgct tgcagtcagc  300
ttcctcttta tggaatccat tccaccaccg gtgcggattc attctattgg atgcgtgtca  360
  
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 gtaagatcaa gaacatggag atggaagaga aagtgaggag ggagattaag attctacggt 300  
 tgtttatgca tctcatatt attcggcagt atgaggtaat agagaccacg agtgacattt 360  
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 aagccaaacg tgagacaaac gctggtcacg gcttatgata cattgctagc cccacaagtc 180  
 aaaacttgta tcgaagtgtc acattttcct caagacaacg cgcgtttcgt gaaaacgcga 240  
 gtaaacggcg gtggaataac aacatgtatt gcaacatggt ttagccaact ctgcattctc 300

ctccacagac ttttaaaaga acggcggtcac gaatcctttg acttacttcg cattttccaa 360  
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 tatttcgacg gttgtccgga taactacca accatttacc caatcggggc gatattatgc 180  
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 gaccaaccgg agtcacgggt cgtgttctc tgtttcggga gcttgaagaa tctcagcgct 300  
 actcagatca acgagatagc tcaagcctta gagatcggtg actgcaaatt catctgggtc 360  
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 <213> Arabidopsis thaliana  
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 agaattcggc tatgtgagta gcagtgactc ggatatggtt acaccgcttt cgcgggatgca 180  
 tatgaagggc aagaaaagag atttaattgt tgacactgat gaagagaaga cctcaaagaa 240  
 gaaagcaaag aagcacaaga agtctctccc gaattcagat atcaaata agcaaacaag 300

tgcactactt gatgaactgg gaancatcaa agccgtctga cagtatgggtt gttgataatg 360  
 agttgaaatt tgacgaacaa ggggttaaact. gtnaggaaaa aattcatcac ttccaagcca 420  
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<210> 5103  
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 attaagagtt ggtgtaaggc gtgcgatgcg acaacaagga aacgtgccgt cttctgttat 300  
 atctagccat agcatgcac ttggagtact ggccaccgca tggcatgcca tttcacaagg 360  
 gacaatgttt anaatcaaca caancaaga acaagccaac ctaatttaac gntccgttcc 420  
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 <211> 448  
 <212> DNA  
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 ttcttcacca ttaatccata accatcatgc ttctcggtat gctcctggat ccctctccgt 180  
 cgtatctctc ccccgctcaag tttcccgccg tggcctctcc gttaaactcg ggttgatcga 240  
 gccagacgga ggaaaactca tgaacctcgt agtcgaagaa tcacggcggc gcntgatgaa 300

acacgaggcg gaaacggttc cggcaaggnt taagctgaac cgtgtgggtt caaaaatggg 360  
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 <211> 403  
 <212> DNA  
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 gacacagtcg ccggaagatt tcgatcaacc atctccgctt cgtaaaaatc atctccgtcg 240  
 cttccatcgc cgccggtgta cagttcgggt gggccttaca gctctctctt cttactccgt 300  
 acgtttcaan tcctcggaat ccctcacaaa tggatcatctc ncatttgggc nctggtggtc 360  
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<210> 5106  
 <211> 428  
 <212> DNA  
 <213> Arabidopsis thaliana  
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 tctctctccg atcccgttaa ggcccaactc gttgagagat tcaaagatct cggcgttacc 180  
 atactctacg gaagtttaag tgataaagag agcttagtga aggcgattaa acaagtcgat 240  
 gtcgtgatat cagctgttgg tcggtttcaa actgaaattc ttaatcaaac caatatcatc 300  
 gatgccatca aagaatctgg aaatgttaag agattcttac cgtcggaatt ggtaatgacg 360

tggatcgtac ggtagcattg agccaacgct atcaagagtt catcactaaa agctcagata 420  
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<210> 5107  
 <211> 467  
 <212> DNA  
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 acaatgctaa gttggagtct cattgagtat agccacaaat acaaagccat cgatgagtat 180  
 gatcacatga gagatgttct caaatggggc actgattatc ttcttctcac tttcaacaat 240  
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 tcaccagatg atatctactg ttggcaaaaa ccagaagaca tgtcctacga ccgtcccgtc 360  
 ctctcttcca cttcggccgc tgaccttggc gcagaagttt ctgcagcctt agctgctgct 420  
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<210> 5108  
 <211> 409  
 <212> DNA  
 <213> Arabidopsis thaliana  
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 cagaggcttc aatgaagctg taaatggttt cactgatgaa ggatggtcag tgataggaga 180  
 tagcatggat gatgtcacia tcaactgtaa ctcttctcca gacaagctaa tgggtctaaa 240  
 tcttacatct gccaatggct ttgctcctgt aagcaatggt gttttatgcn caaaacatca 300  
 atgctttttac aagaatgttc ctccggcgat cctgcttcgg ttctgaagga gcatangtca 360



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<210> 5111  
 <211> 450  
 <212> DNA  
 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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 cgatcacata tttcatctgt gtgttttcat tttgaggatg ccagcaacgg aatatcaaag 180  
 atcattcggg aggtcttttc tgaatttacg gcgagacacg gcggtgaact cggttgagtc 240  
 aacgacggtt acccccgagt tgactcagat ggaagcagag cttgtttcgt ttcagagaaa 300  
 agttgctgag aggtttatcg atctcaatgc gtctagtgtg gaagatctac tgtctctcga 360  
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<210> 5112  
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 <213> Arabidopsis thaliana  
 <223> unsure at all n locations  
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ga 422

<210> 5113  
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gcggtagtga ttgactgag agaagaggga tncctgccgc caaatcatc caagatgtgg 180  
agacttatct ctctcagtct ggtctcgatt ctaactctgc tctcgccttt caccaaagaa 240  
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gctaaaatcc caaatattga aaagtgttta aaagggtgtt gccaaacttg aaaccaaaga 360  
aagggtactgg gtaaggccct cctaaactga attttgangg tgtcctgaan gaataatatt 420  
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<210> 5114  
<211> 422  
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ctcttgtcgt atttaagctt ttctaattgg ttactgcaac ctcgtaggat ttctcatgga 180  
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cactactctc catctgatca tcgcaaattc agacaggaga tactatgaat atcttgacca 300